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NATURAL HISTORY

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

EDITED BY

LT.-COL. W. P. C. TENISON, D.S.O.

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PREFACE.

During the Session 1945–46 the Club was able to resume its normal activities.

The Annual General Meeting was held on Wednesday, October 17, 1945, when it was decided to hold meetings on the third Wednesday of each month, November to June, following dinner at the Rembrandt Hotel, South Kensington, S.W.7.

The number of attendances for the Session was as follows :—293 members of the Club, 57 members of the Union, 2 guests of the Club, and and 129 other guests, a total of 481.

Pagers were read by Mr. J. G. Harrison on " Bird Migration ", Dr. L. Harrison Matthews on " Antarctic Birds ", Dr. Hugh B. Cott on " Coloration and Edibility of Birds ", Mr. Gregory Mathews on " Birds of Canberra, Australia ", Mr. K. Williansom on " The General Ornithology of the Faeroe Islands ", Mr. J. M. D. Mackenzie on " Forest Ornithology ", Mr. P. A. Clancey on " Racial Survey of British Birds ". Many of these papers were illustrated by lantern slides.

The meeting in March was held in conjunction with the Annual General Meeting of the Union. After dinner, to which 122 sat down, Mr. G. K. Yeates showed some of his recent successes in bird photography, and Mr. W. B. Tucker and Mr. David Lack showed short films of Gannets and Robins respectively.

Mr. David Lack also contributed a paper on " The Taxonomy of the Robin ", Dr. J. M. Harrison on the races of Great Tit, Mr. B. W. Tucker and Mr. H. W. Southern amplified the remarks they made in the discussion following Mr. Clancey's paper. Mr. Mackworth-Praed and Col. Meinertzhagen also gave an account of the conditions in Heligoland.

New forms were described by Dr. J. M. Harrison, Mr. P. A. Clancey, Dr. V. G. L. van Someren, Mr. C. M. N. White, Mr. W. H. Payn, Mr. Hugh F. J. Elliott, Mr. C. W. Benson, Dr. W. Serle.

Captain C. H. B. Grant and Mr. C. W. Mackworth-Praed continued their valuable notes on East African birds.

The Club entertained as a distinguished guest, Prof. J. G. van Oordt, Utrecht University, Holland.

There was no Chairman's Address again this year.

W. P. C. TENISON,
Editor.

London, July 1946.

BRITISH ORNITHOLOGISTS' CLUB.

(Founded October 5, 1892.)

TITLE AND OBJECTS.

The objects of the Club, which shall be called the "British Ornithologists' Club", are the promotion of social intercourse between Members of the British Ornithologists' Union and to facilitate the publication of scientific information connected with ornithology.

RULES.

(*As amended, October* 12, 1938.)

Management.

I. The affairs of the Club shall be managed by a Committee, to consist of a Chairman, who shall be elected for three years, at the end of which period he shall not be eligible for re-election for the next term; two Vice-Chairmen, who shall serve for one year, and who shall not be eligible for the next year; an Editor of the 'Bulletin', who shall be elected for five years, at the end of which period he shall not be eligible for re-election for the next term; a Secretary and a Treasurer, who shall each be elected for a term of one year, but who shall be eligible for re-election. There shall be in addition four other Members, the senior of whom shall retire each year, and another Member be elected in his place; every third year the two senior Members shall retire and two other Members be elected in their place. Officers and Members of the Committee shall be elected by the Members of the Club at a General Meeting, and the names of such Officers and Members of Committee nominated by the Committee for the ensuing year shall be circulated with the notice convening the General Meeting at least two weeks before the Meeting. Should any member wish to propose another candidate, the nomination of such, signed by at least two Members, must reach the Secretary at least one clear week before the Annual General Meeting.

II. Any Member desiring to make a complaint of the manner in which the affairs of the Club are conducted must communicate in writing with the Chairman, who will, if he deem fit, call a Committee Meeting to deal with the matter.

III. If the conduct of any Member shall be deemed by the Committee to be prejudicial to the interest of the Club, he may be requested by the Committee to withdraw from the Club. In the case of refusal, his name may be removed from the list of Members at a General Meeting, provided that, in the notice calling the Meeting, intimation of the proposed resolution to remove his name shall have been given, and that a majority of the Members voting at such Meeting record their votes for his removal.

Subscriptions.

IV. Any Member of the British Ornithologists' Union may become a Member of the Club on payment to the Treasurer of an entrance-fee of one pound and a subscription of one guinea for the current Session. On Membership of the Union ceasing, Membership of the Club also ceases.

Any Member who has not paid his subscription before the last Meeting of the Session shall cease, *ipso facto*, to be a Member of the Club, but may be reinstated on payment of arrears.

Any Member who has resigned less than five years ago may be reinstated without payment of another Entrance Fee.

Any Member who resigns his Membership on going abroad may be readmitted without payment of a further Entrance Fee at the Committee's discretion.

Temporary Associates.

V. Members of the British Ornithologists' Union who are ordinarily resident outside the British Isles, and ornithologists from the British Empire overseas or from foreign countries, may be admitted at the discretion of the Committee as Temporary Associates of the Club for the duration of any visit to the British Isles not exceeding one Session. An entrance fee of five shillings shall be payable in respect of every such admission

if the period exceeds three months. The privileges of Temporary Associates shall be limited to attendance at the ordinary meetings of the Club and the introduction of guests.

Meetings.

VI. The Club will meet, as a rule, on the second Wednesday in every month, from October to June inclusive, at such hour and place as may be arranged by the Committee, but should such Wednesday happen to be Ash Wednesday, the Meeting will take place on the Wednesday following. At these Meetings papers upon ornithological subjects will be read, specimens exhibited and described, and discussion invited.

VII. A General Meeting of the Club shall be held on the day of the October Meeting of each Session, and the Treasurer shall present thereat the Balance-Sheet and Report; and the election of Officers and Committee, in so far as their election is required, shall be held at such Meeting.

VIII. A Special General Meeting may be called at the instance of the Committee for any purpose which they deem to be of sufficient importance, or at the instance of not fewer than fifteen Members. Notice of not less than two weeks shall be given of every General and Special General Meeting.

Introduction of Visitors.

IX. Members may introduce visitors at any ordinary Meeting of the Club, but the same guest shall not be eligible to attend on more than three occasions during the Session. No former Member who has been removed for non-payment of subscription, or for any other cause, shall be allowed to attend as a guest.

'Bulletin' of the Club.

X. An Abstract of the Proceedings of the Club shall be printed as soon as possible after each Meeting, under the title of the 'Bulletin of the British Ornithologists' Club', and shall be distributed gratis to every Member who has paid his subscription.

Contributors are entitled to six free copies of the 'Bulletin', but if they desire to exercise this privilege they must give notice to the Editor when their manuscript is handed in. Members purchasing extra copies of the 'Bulletin' are entitled to a rebate of 25 per cent. on the published price, but not more than two copies can be sold to any Member unless ordered before printing.

Descriptions of new species may be published in the 'Bulletin', although such were not communicated at the Meeting of the Club. This shall be done at the discretion of the Editor and so long as the publication of the 'Bulletin' is not unduly delayed thereby.

Any person speaking at a Meeting of the Club shall be allowed subsequently—subject to the discretion of the Editor—to amplify his remarks in the 'Bulletin', but no fresh matter shall be incorporated with such remarks.

XI. No communication, the whole or any important part of which has already been published elsewhere, shall be eligible for publication in the 'Bulletin', except at the discretion of the Editor; and no communication made to the Club may be subsequently published elsewhere without the written sanction of the Editor.

Alteration and Repeal of Rules.

XII. Any suggested alteration or repeal of a standing rule shall be submitted to Members to be voted upon at a General Meeting convened for that purpose.

COMMITTEE, 1945–1946.

Mr. D. Seth-Smith, *Chairman* (elected 1943).
Mr. C. W. Mackworth-Praed, *Vice-Chairman* (elected 1945).
Dr. J. M. Harrison, *Vice-Chairman* (elected 1945).
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Miss E. P. Leach, *Hon. Treasurer* (elected 1942).
Mr. James Fisher (elected 1944).
Mr. C. W. G. Paulson (elected 1944).
Captain C. H. B. Grant (elected 1944).
Miss G. M. Rhodes (elected 1945).

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Waite, Herbert William, C.I.E. ; c/o Messrs. Grindlay & Co., Ltd., Bombay, India.

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130 White, Charles M. N. ; 8 Ansdell Road South, Ansdell, Lytham St. Annes, Lancs.

Workman, William Hughes ; Lismore, Windsor Avenue, Belfast.

Worms, Charles de ; Milton Park, Egham, Surrey.

Yamashina, The Marquis ; 49 Minami Hiradei, Shikuya-ku, Tokio, Japan.

Total number of Members.... 133

NOTICE.

[Members are specially requested to keep the Hon. Secretary informed of any changes in their addresses, and those residing abroad should give early notification of coming home on leave.]

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PURCHASED

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCLIX.

ANNUAL GENERAL MEETING.

Chairman : Mr. D. Seth-Smith.

This was held at the Rembrandt Hotel, Thurlow Place, S.W. 7, at 6.30 p.m. ; 25 Members present.

Dr. G. Carmichael Low, the Honorary Secretary, read his report for the Session 1944–45. He said that the chief events of the year were the termination of the war in Europe and, later, in Japan. The Club would thus commence the new Session on a peace-time basis. The membership of the Club had turned the tide and had risen a little. He was pleased to say that he had no deaths or resignations to report. Six new members, Captain G. McCulloch, Dr. A. McMillan, E. R. Parrinder, A. A. Prestwich, H. N. Southern and Lieut.-Colonel W. P. C. Tenison, had joined the Club.

Five Meetings of the Club had been held—in October (Annual General and Ordinary Meeting) ; January, March (in conjunction with the British Ornithologists' Union) ; May and June.

The number of attendances for the Session was as follows :—101 members of the Club, 19 members of the B. O. U., 1 guest of the Club, and 38 other guests, a total of 159, a rise from the 110 of the 1943–44 Session.

Miss E. P. Leach, the Honorary Treasurer, reported a satisfactory financial position. The balance at the Bank amounts to £181 14*s.* 9*d.*, as against £167 15*s.* 11*d.* at this time last year.

All members who were in a position to do so had paid up their subscriptions, and it was particularly pleasing to receive from one of our

BRITISH ORNITHOLOGISTS' CLUB.

Financial Statement for the year ended August 31, 1945.

1944.										1944.								
£	*s.*	*d.*		£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*		£	*s.*	*d.*	£	*s.*	*d.*
			To balance September 1, 1944 :—										By Printing and Distribution of						
238	2	9	Cash at Bank, Current a/c .	167	15	11				113	6	2	Publications and 'Bulletin'.	....			140	13	11
1	10	7	Do. Deposit a/c .	1	10	7							,, Compiling Index and List of						
	7	7	Cash in hands of Treasurer		14	6				6	7	1	Authors to 'Bulletin'	....			6	6	11
			500 National Savings Certificates at cost (held by										,, Hire of Lantern, etc., at						
400	0	0	Bank)	400	0	0				3	12	6	Meetings	....			7	5	0
255	13	4	£256 14*s.* 1*d.* 3½% War Loan	255	13	4							,, Zoological Society—Contribution towards cost of						
–	–	–	3% Savings Bonds 1960/70	100	0	0				10	10	0	'Zoological Record'	....			10	10	0
							925	14	4				,, Miscellaneous Expenditure,						
2	0	0	,, Entrance Fees of 4 Members	4	0	0							including Audit Fee, Print-						
			,, Subscriptions :—							16	16	11	ing, Stationery and Postages	....			17	15	7
1	1	0	2 Arrears	4	7	0							,, Balance, August 31, 1945 :—						
120	15	0	115 Members at £1 1 0	120	15	0				167	15	11	Cash at Bank, Current a/c	181	14	9			
1	0	0	1 Member at £1 0 0	–	–	–				1	10	7	Do. Deposit a/c	–	–	–			
			2 Members at £1 1 0								14	6	Cash in hands of Treasurer	1	4	11			
–	–	–	in advance	2	2	0							500 National Saving Certifi-						
							131	4	0	400	0	0	cates at Cost, held by Bank	400	0	0			
45	18	5	,, Sales of 'Bulletin'	52	6	5				255	13	4	£256 14*s.* 1*d.* 3½% War Loan	255	13	4			
			,, Interest on Investments :—							100	0	0	3% Savings Bonds 1960/70	100	0	0			
8	19	8	3½% War Loan.....	8	19	8											938	13	0
	18	8	3% Savings Bonds.....	3	0	0													
							11	19	8										
£1,076	7	0					£1,121	4	5	£1,076	7	0					£1,121	4	5

E. P. LEACH, *Hon. Treasurer.*

We have examined the foregoing Account with the Books and Vouchers of the Club for the year ended August 31, 1945, and certify it to be in accordance therewith. We have also verified the Cash at Bank and the Securities.

224, Regent Street, London, W.1.
October 15, 1945.

W. B. KEEN & Co.,
Chartered Accountants.

foreign members the whole amount of his arrears, as soon as ever exchange became possible. The Club's investments in Government Stocks now amount to £755 at cost, and the small Deposit Account has been absorbed into Current Account by request of the Bank, as it has not been made use of for a number of years.

The sales of the ' Bulletin ' show an increase of over £6.

We again made a contribution of ten guineas towards the production of the ' Zoological Record '.

Election of Officers.

The Committee proposed that Lieut.-Colonel C. W. Mackworth-Praed and Dr. J. M. Harrison be nominated as Vice-Chairmen for the ensuing year, and they were duly elected. In place of Dr. Carmichael Low, whose period of office had terminated, Lieut.-Colonel W. P. C. Tenison was elected Editor, and he agreed to act as Honorary Secretary until the post could be filled. Mr. James Fisher was re-elected to the Committee and Miss G. M. Rhodes was elected a new member.

Arrangements for Session.

It was decided to hold meetings of the Club in the evenings after dinner as before the war, *i. e.* nine meetings, October to June.

Committee, 1945–1946.

Mr. D. Seth Smith, *Chairman* (elected 1943).
Lieut.-Colonel C. W. Mackworth-Praed, *Vice-Chairman* (elected 1945).
Dr. J. M. Harrison, *Vice-Chairman* (elected 1945).
Lieut.-Colonel W. P. C. Tenison, *Editor* (elected 1945); *Hon. Secretary* (elected 1945).
Miss E. P. Leach, *Hon. Treasurer* (elected 1942).
Mr. James Fisher (elected 1944).
Mr. C. W. G. Paulson (elected 1944).
Captain C. H. B. Grant (elected 1944).
Miss G. M. Rhodes (elected 1945).

ORDINARY MEETING.

The four-hundred-and-fifty-second meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, October 17, 1945, following a dinner at 7 p.m.

Chairman: Mr. D. Seth-Smith.

Members present:—Miss C. M. Acland; Miss P. Barclay-Smith; F. J. F. Barrington; Hon. G. L. Charteris; R. S. R. Fitter; Captain H. A. Gilbert; Miss E. Godman; J. G. Harrison; Dr. J. M. Harrison;

R. E. Heath ; P. A. D. Hollom ; N. B. Kinnear ; D. Lack ; Miss E. P. Leach (*Hon. Treasurer*) ; Miss C Longfield ; Dr. G. Carmichael Low ; Dr. P. R. Lowe ; J. D. Macdonald ; Lieut.-Colonel C. W. Mackworth-Praed ; Sir P. Manson-Bahr ; E. R. Parrinder ; C. W. G. Paulson ; Miss G. M. Rhodes ; Colonel R. Sparrow ; Lieut.-Colonel W. P. C. Tenison (*Editor and Hon. Secretary*) ; Dr. A. Landsborough Thomson ; B. W. Tucker ; C. de Worms.

Members of the Union present :—Major G. Aylmer ; Dr. J. Berry ; C. J. F. Coombs ; C. T. Dalgety ; R. P. Donaldson ; Miss J. M. Ferrier ; T. B. W. Jeans ; Mrs. H. M. R. Kerr ; Lieut.-Colonel W. A. Payn ; Mrs. O. Peall ; C. J. Stevens.

Guests :—Miss V. Charteris ; Monsieur Etchécopar ; Mrs. M. Gilbert ; Miss Gilbert ; Miss O. Gilbert ; T. R. Goddard ; Mrs. C. E. Godman ; F. N. Holroyde ; Captain R. A. Jackson, R.N. ; G. F. Jolly ; Mrs. G. C. Low ; Mrs. P. R. Lowe ; Lieut.-Commander P. Scott ; Mrs. D. B. Sparrow ; Mrs. A. L. Thomson.

Members, 29 ; Members of B. O. U., 11 ; Guests, 15. Total, 55.

Three new Races of Fringilla coelebs Linnaeus from the Mediterranean Region.

Dr. J. M. Harrison communicated the following :—

I have in course of preparation a study of the above species group, and have considered it desirable to separate in advance as distinct the birds inhabiting the extreme south-westerly and south-easterly regions of the Continental mainland, and also the bird inhabitin the island of Cyprus. The bird from south-western Europe I designate :

Fringilla cœlebs iberiæ, subsp. nov.

Description.—Differs from *F. c. cœlebs* in being generally paler underneath, not so red-pink. Chin, throat and breast pale salmon-pink, flank of same colour but paler ; belly and under tail-coverts white ; ear-coverts, lores and superciliary region brownish pink. Forehead and nasal bristles blackish. Crown, nape and sides of neck blue-grey. Mantle rather dark chestnut-brown, slightly intermixed greenish. Rump rather dark apple-green. Scapulars dark greyish tipped dull chestnut, as mantle. Lesser wing-coverts parti-coloured black and white ; median wing-coverts white, greater wing-coverts black tipped white, forming a white wing-bar. Primaries and secondaries blackish, narrowly edged with white, the latter with white bases ; under wing-coverts dusky, axillaries white. Tail : two central rectrices grey, barred dark blackish on outer vanes at bases ; rest black, but outermost pair mostly white, but with black wedge-shaped markings with apices directed medially and with large wedge-

shaped white markings on inner vanes at bases. A narrow blackish pyriform marking on lateral side of tip. Second pair from without black with very narrow white edges to outer vanes and with large wedge-shaped white markings on inner vanes, with apices on quills. Third rectrix on right with a small elongated and medially constricted white marking at tip on inner vane; third rectrix on left with a much suppressed fleck of white at tip on inner vane. Third pair from without with suppressed white markings at extreme tips of inner vanes. Upper tail-coverts greyish.

Distribution.—This race would appear to be confined to the Iberian peninsula.

Type.—In Whistler collection. Adult male, no. 11279. May 3, 1934. Cizimbra, South Portugal.

Measurements of Type.—Wing 87 mm., bill 14·5 mm., tarsus 19 mm., tail 65 mm.

From the south-eastern end of the Mediterranean basin I designate the form:

Fringilla coelebs syriaca, subsp. nov.

Description.—Differs from *F. c. cœlebs* in being pale pinkish mauve underneath and not red-pink. This form closely resembles *F. c. iberiæ* in the general paleness of its under parts. Chin pinkish mauve lightly tipped pale ash. Throat, breast, and flanks palish mauve, centre of belly white, as also under tail-coverts. Lores somewhat dusky; ear-coverts and superciliary region mauvish brown tipped pale ash. Forehead and nasal bristles blackish slightly tipped palish ash. Crown and nape and sides of neck somewhat paler blue-grey than in *F. c. iberiæ*. Junction of nape and mantle slightly greenish. Rump yellowish green, as distinct from the darker apple-green of *F. c. iberiæ*. Scapulars dark grey tipped dark chestnut-brown. Lesser wing-coverts parti-coloured black and white. Median wing-coverts white, greater wing-coverts black tipped white, forming narrow white wing-bar. Primaries and secondaries brownish black edged yellowish white, secondaries white at bases. Under wing-coverts dusky, axillaries white. Upper tail-coverts grey. Tail: two central rectrices greyish, rest brownish black, but outermost with lateral vanes white on proximal halves, black on distal halves, medial vanes white with black oblique markings, at bases with apices on edges of medial vanes and with pyriform blackish markings on tips coalescing with black lateral vanes. Second pair, from without outer vanes black with extremely narrow white edges; rest black with large wedge-shaped white markings, with apices on quill and recurved on medial border of vane.

Distribution, as at present known—Syria.

Type.—In Colonel R. Meinertzhagen's collection. Adult male. May 12, 1933. Becharres, 6000 feet ; Lebanon. Notes as breeding.

Measurements of Type.—Wing 92 mm., bill 16·5 mm., tarsus 16·5 mm., tail 69 mm.

The form from the island of Cyprus I designate :

Fringilla cœlebs cypriotis, subsp. nov.

Description.—Differs from *F. c. cœlebs* in being violaceous as against a red-pink underneath. This bird stands near to the Syrian race. Chin, throat and breast pinkish-mauve ; belly somewhat paler and white in centre ; under tail-coverts white ; sides of breast and flanks slightly brownish ; lores, superciliary region and ear-coverts rather dark mauvish brown. Forehead and nasal bristles blackish. Crown, nape and sides of neck rather darker blue-grey than in *F. c. syriaca*. Mantle a rather strong chestnut-brown and showing less admixture of green. Rump : a rather darkish apple-green in contrast to the yellowish green of *F. c. syriaca*. Scapulars dark greyish tipped chestnut. Lesser wing-coverts parti-coloured black and white, median wing-coverts white, greater wing-coverts black tipped white, forming a well-marked white wing-bar. Primaries and secondaries brownish black, the latter with white bases. Under wing-coverts dusky, axillaries white ; upper tail-coverts grey. Tail : central pair of rectrices grey, rest dull black, but outermost pair white, with black wedge-shape markings on medial vanes proximally, with apices medially ; on tips of medial vanes a dusky marking forms a narrow pyriform spot at tip where it coalesces with the blackish outer vane. Second pair from without blackish, with very narrow white edges to outer vanes and large white wedge-shaped markings on inner vanes, with apices on quill and recurving on medial borders of feathers.

Distribution.—Confined to the island of Cyprus.

Type.—In Colonel W. A. Payn's collection. Adult male. April 2, 1938. Platres, Cyprus.

Measurements of Type.—Wing 87 mm., bill 14 mm., tarsus 19 mm., tail 67 mm.

Remarks.—Two new mainland forms and one new insular form are described. The Mediterranean basin, in so far as its European and Levantine areas are concerned, is of interest in that this region supports several well-defined races, viz., *F. c. balearica* von Jordans, Balearic Isles ; *F. c. tyrrhenica* Schiebel, Corsica ; *F. c. sarda* Rapine, Sardinia ; *F. c. schiebeli* Stresemann, Crete ; and to these insular races has now been added *F. c. cypriotis* from Cyprus. This bird has been compared with the above examples, and particularly with specimens from the Balearic Isles, Corsica and Crete. Compared with *F. c. balearica* the Cyprus bird is seen

to be more violaceous, less brownish-pink, particularly on the breast and ear-coverts. It is at once distinguishable from *F. c. schiebeli* in lacking the green in the mantle. In general appearance the Cypriote form is near to *F. c. tyrrhenica*, but the wings are brownish black as distinct from the intense black of the Corsican race with its markedly suppressed and narrow white wing-bar. It is further distinct from this bird in that the ear-coverts of *F. c. tyrrhenica* are of a somewhat pale chestnut-brown. Compared with *F. c. sarda*, the Cyprus bird is violaceous as against a yellowish cinnamon, more particularly as regards the throat, breast and ear-coverts, while from the south-eastern mainland form, *F. c. syriaca*, described above, it is seen to be a generally darker race. A rather more detailed study of this species has rendered some modification of the views contained in my note, " Some Remarks upon European Chaffinches, with special Reference to *Fringilla cœlebs balearica* von Jordans " (Ibis, 1934, pp. 396–398), desirable, and it is hoped that in a future communication the main affinities of the species in the western Palæarctic region will be clarified. For the present it will be sufficient to state that for the races discussed in this note a close affinity is demonstrable between *F. c. iberiæ*, *F. c. balearica*, *F. c. tyrrhenica*, *F. c. sarda* and *F. c. schiebeli*, while the morphological characters presented by *F. c. syriaca* and *F. c. cypriaca* would suggest that these two stand in close relationship to one another and are divergent from the forms listed above.

The range of wing measurements of the forms considered is as follows :—

	mm.
F. c. iberiæ	80 –89
F. c. balearica	82 –94
F. c. tyrrhenica	86 –88
F. c. sarda	85·5–92
F. c. schiebeli	84 –89
F. c. cypriotis	85 –94
F. c. syriaca	84 –91

I gratefully acknowledge the loan of material from the Hon. Mrs. Hugh Whistler, Colonel R. Meinertzhagen and Colonel W. A. Payn.

Notes on Eastern African Birds.

Captain C. H. B. Grant and Lieut.-Colonel C. W. Mackworth-Praed sent the following six notes :—

(1) On the Relationship of *Pycnonotus xanthopygos* (Hemprich and Ehrenberg), Symb. Phys. fol. bb, 1828 : Arabia, and *Pycnonotus tricolor* (Hartlaub), Ibis, 1862, p. 341 : Angola.

Mr. N. B. Kinnear has very kindly drawn our attention to the possibility of these two species being conspecific, and we have, therefore,

examined and carefully compared the series in the British Museum collection. We are quite satified that this is the case, and therefore we place *Pycnonotus tricolor* (Hartlaub) as a race of *Pynconotus xanthopygos* (Hemprich & Ehrenberg).

Delacour, Zoologica, xxviii. 1943, p. 22, has placed both these under *Pycnonotus barbatus* (Desfontaine), 1787 ; but we are of opinion that *Pycnonotus barbatus* and *Pycnonotus xanthopygos* are better left as species, as they would appear to overlap in the Sudan.

(2) On the Races of *Calamonastes simplex* (Cabanis).

In the Bull. B. O. C. lxii. 1942, p. 59, we discussed this species and placed *Calamonastes katangæ* Neave as a race of it. Although the adult of *C. katangæ* agrees closely with the adult of *C. simplex*, especially *C. s. undosus* (Reichenow), the one young bird we have been able to examine, B.M. Reg. no. 1909.12.31.200, does not agree with the young bird of *C. simplex*, being quite unbarred below and with a yellowish wash, whereas the young bird of *C. simplex* in all its races agrees closely with the adult and has no yellowish wash below. We are therefore of opinion that *Calamonastes katangæ* Neave should be treated as a species and not as a race of *Calamonastes simplex* (Cabanis).

(3) On the Distribution of *Camaroptera brevicaudata* (Cretzschmar) in Eastern Africa.

In Bull. B. O. C. lxi. 1941, p. 67, we discussed the races, seasonal changes and distribution of this species.

Recently the British Museum (Natural History) has received further specimens which, on examination, cause us to alter the distribution of four races, as follows :—

Camaroptera brevicaudata tincta (Cassin).

Distribution.—Sierra Leone and Gabon to Uganda except north-western area ; western Kenya Colony at Rusinga Island and Kanan ; western Tanganyika Territory at Kome Island, south-western Lake Victoria, Kasulu and the Kungwe-Mahare Mountains, and southern Belgian Congo.

Camaroptera brevicaudata griseigula Sharpe.

Distribution.—Kenya Colony except the north-eastern area, the western area at Rusinga Island and Kanan and the coast area ; Tanganyika Territory as far east as Voi and Mount Kilimanjaro and as far south as Mbulu and Lossogonoi, also Ukerewe Island, south-eastern Lake Victoria.

Camaroptera brevicaudata noomei Gunning & Roberts.

Distribution.—Headwaters of the Nyamansi River and Iringa * central

* The distribution to Iringa agrees with Lynes's identification in J. f. O. 1934, Sond. p. 92.

Tanganyika Territory, to Nyasaland as far north as Kota-Kota ; Northern Rhodesia, southern Portuguese East Africa and northern Transvaal.

Camaroptera brevicaudata erlangeri Reichenow.

Distribution.—Coastal area of Italian Somaliland and Kenya Colony from the lower Juba River and Manda Island to Tanganyika Territory from north-eastern area between the coast and Amani and Handeni and as far west as Mpapwa.

(4) On the Type-locality of *Anomalospiza imberbis* (Cabanis), J. f. O. 1868, p. 412.

Cabanis, in Reisen von der Decken, iv. 1870, p. 454, gives Mombasa to Zanzibar, and Sclater, Syst. Av. Æthiop. 1930, p. 784, gives "probably on the coast opposite Zanzibar".

As this species is found over a very wide area, including the whole of Kenya Colony, we consider that the first locality given by Cabanis, *i. e.* Mombasa, should be accepted as the type-locality of *Anomalospiza imberbis* (Cabanis).

(5) On the Status of *Cryptospiza borealis* Percival, Bull. B. O. C. xxix. 1912, p. 76 : Mount Urguess, northern Kenya Colony.

We have examined the types of this race and find that they are both young birds of *Cryptospiza salvadorii salvadorii* Reichenow, J. f. O. 1892, p. 187 : Sciolitat, Shoa, central Abyssinia. Therefore *Cryptospiza borealis* Percival becomes a synonym of *Cryptospiza salvadorii salvadorii* Reichenow.

(6) Occurrence of the West African Green-backed Twin-spot in Northern Angola.

Dr. D. A. Bannerman in Bull. B. O. C. lxiv. 1944, p. 41, records *Mandingoa nitidula schlegeli* (Sharpe) from Fernando Po, and we can now record its occurrence at Quiscolungo in northern Angola on an adult female collected by R. H. Braun on March 25, 1939. Collector's no. 20. This specimen is in the British Museum collection

Notes on East African Birds.

Dr. V. G. L. van Someren sent the following notes :—

(1) On the Status of *Phyllastrephus keniensis* Mearns.

In 1914 the late Dr. Mearns described the Mount Kenya bird (Smith. Misc. Coll. no. 25, p. 2) as a race of *P. f. placidus* Shelley, type-locality Kilimanjaro. Sclater in ' Systema Avium Æthiopocarum ', p. 384, places *P. f. placidus* as a race of *P. f. fischeri* of Muniumi, lower Juba River.

In 1922 I tentatively admitted *P. f. keniensis* without criticism (Nov.

Zool. xxii. p. 185). In 1932 I placed Mearn's bird as a synonym of *P. f. placidus* on the material then available to me. Moreau, Bull. B. O. C. 1937, pp. 126–27, does the same, and this view is supported by Grant and Praed.

In July 1943 my son, G. R. C. van Someren, procured specimens from the forest above Meru, Mount Kenya, and this led me to re-examine my long series of *P. f. fischeri*. The Meru birds proved to be considerably darker above and below, and I accordingly asked my friend Mr. J. P. Benson, of Meru, to collect a series. This material, 14 specimens, is now to hand.

These birds, together with my son's material, are very uniform and are altogether darker above and more strongly washed below on breast and flanks with olive, and the ear-coverts are very much darker than any other race. I have therefore taken the opportunity to lay out the whole of my very large topotypical series from Kilimanjaro, *P. f. placidus*, Mount Marsabit, *P. f. marsabit*, and Mount Kenya (Meru).

There is not the slightest doubt that the three are distinct. The Meru birds are the darkest, the Mount Marsabit birds the palest; thus we have a dark bird cutting in across the distribution of the other two.

It is unfortunate that the type-locality of *P. f. keniensis* is merely stated to be Mount Kenya at 8500 feet, without reference to east or west aspects, an important matter, for they differ. The question arises, can the name *P. f. keniensis* Mearns be applied to these Meru birds ?

Friedmann, in Bull. U. S. N. H. Mus. 153, with Mearn's type before him, united *P. f. keniensis* with *P. f. placidus*, but one must note the paucity of his topotypical material of the latter.

It is of interest to note here that Moreau states that the egg of *P. f. placidus* of Amani, Usambara, of which *P. f. cognitus* Grote is said to be a synonym, has a grey-green ground colour. I have seen dozens of clutches here (Ngong, Nairobi), and they all have pink grounds. I personally recognize *P. f. cognitus* as distinct.

In Bull. B. O. C. lx. pp. 39–40, Grant and Praed dispose of my race *P. f. chyuluensis* as a synonym of *P. f. placidus* without having seen any of the original or even topotypical material. They had one bird from Taita, a totally different region !

(2) A new Race of *Phyllastrephus terrestris* Swainson.

Amongst the birds submitted to me by Mr. Benson was a specimen of *P. terrestris*, which I at once recognized as distinct from the coastal Kenya Colony bird, which is associated with the race *P. t. suahelicus* Reichenow, type-locality Bagamoyo, Tanganyika Territory. The distribution given by Sclater in the 'Systema' should be extended to include

the Kenya Colony coast belt, if the Kenya Colony birds are *P. t. suahelicus*. Mr. Benson has now secured further material, which he has given to me.

There would appear to be no previous record of *Phyllastrephus terrestris* from inland Kenya Colony.

Phyllastrephus terrestris bensoni, subsp. nov.

Description.—Differs from *P. terrestris suahelicus* Reichenow of the Kenya Colony coast belt by being much more olivaceous on the upper side, in having a much darker crown and ear-coverts, and less white around the eye ; much darker wings, rump and tail ; the sides of the breast and flanks more olivaceous, thus the white of the throat is more accentuated ; the underside of the body is more streaked with yellowish ; larger.

Distribution.—Only known from the lower Meru forests and lower Chuka, at 4000 to 4600 feet.

Type.—In my collection. Male adult, in fresh plumage and gonads enlarged. Lower Meru forest, 4000 feet. Collected by J. P. Benson, no. 459, June 1944.

Measurements of Type.—Wing 98, culmen 17, tail 100, tarsus 20 mm.

Remarks.—Paratypes, male, Makinduri, March 13, 1944, female June 14, 1944. Occurs in the lower Meru-Chuka forests, and not found in the higher forests. The female is smaller and more streaked with yellowish on the underside. Named in honour of Mr. J. P. Benson, who collected the material. The line of northward extension of this species, as with others, would appear to be up the Tana River valley*.

(3) Note on *Stilbopsar kenricki* (Shelley).

Amongst the birds submitted by Mr. Benson were examples of this small forest Starling. His material agreed with two skins taken by me many years ago at Meru, which I had tentatively placed as *S. kenricki*, type-locality Usambara, though they showed a distinct difference to material from the Kilimanjaro-Taveta forest. I asked Mr. Benson to secure a long series ; he has submitted 14 adults. They substantiate the points of difference previously noted. I therefore submit a description of this racial form as

Stilbopsar kenricki bensoni, subsp nov.

Description.—Larger than *S. kenricki kenricki* (Shelley), with a longer, heavier bill ; much blacker in general plumage, without the distinct

* Cf. *Sigmodius scopifrons*, *Neocossyphus rufus*, *Halcyon albiventris*, *Hypargos niveoguttatus*, *Bias musicus*, *Lamprocolius corruscus*, etc., all of which appear as recognizable inland races.

change in upper and lower breast ; belly, brassy purply tone of the nominotypical race ; less brassy on the upper side.

Distribution.—The eastern slopes of Mount Kenya, descending to the forests on the 6000-foot level.

Type.—In my collection. Male adult, Meru, Mount Kenya, 6500 feet. Collected by J. P. Benson, no. 3, February 1944.

Measurements of Type.—Wing 112, culmen 15, tail 98 mm.

Remarks.—Breeding in the higher forests, coming to the lower elevations to feed on fruiting trees. Associates in large flocks. Young of the season are on the wing in May, whereas young of *S. k. kenricki* of comparable age are noted in August. (Taveta-Lumi.) Comparative wing measurements are : Meru birds, 109 to 113, average 111 mm. Kilimanjaro area, 100 to 106, average 104 mm. for the males ; the females, Meru 106, Kilimanjaro 97 to 103 mm.

Nineteen specimens of the new race, including the type, are in my collection.

(2) Presumed new Records from Uganda.

A further visit to the Bwamba district of western Ruwenzori has produced the following material which, although recorded from the Semliki-Ituri region, has not hitherto been obtained from within the Uganda Protectorate. They are here recorded so that they may be listed in Mackworth-Praed and Grant's Handbook.

Urotriorchis macrourus Hartlaub has been noted on several occasions, and probably belongs to the race *U. m. batesi* Swann, recorded from the Ituri.

Columba albinucha Sassi. Placed as a race of *C. arquatrix* Temminck & Knip by Sclater, in the ' Systema ', is considered by Chapin to be a distinct species. Specimens of both species were obtained in the same general area, but *C. arquatrix* at higher elevations.

Agapornis swinderiana (Kuhl). A species not hitherto recorded ; now taken at Bwamba. Neumann's race, *C. emini* Neumann, from the Ituri, is considered not distinct from *C. zenkeri* Reichenow by Chapin.

Chrysococcyx flavigularis Shelley. Chapin states that the species is to be found in the Ituri. A specimen was secured from Bwamba.

Bycanistes albotibialis Cabanis and Reichenow. Has been recorded from the Semliki by Chapin, and is now taken in the Bwamba Valley.

Neocossyphus rufus arrhenii Lönnberg. Described from Beni, but considered by Sclater to be doubtfully distinct from *N. gabunensis* Neumann. Now taken in the Bwamba Valley.

Pœoptera lugubris major Neumann. A new record for Uganda, though previously taken in the Ituri. Said by Sclater to be doubtfully distinct from the nominotypical *P. lugubris* Bonaparte.

A Note on the Larks of the Mirafra rufocinnamomea Group.

Mr. C. M. N. White sent the following note, with a description of a new race :—

In Bull B. O. C. lxiv. 1943, p. 21, I commented on specimens of *Mirafra rufocinnamomea* (Salvadori) from western Balovale which were much paler than *M. r. zombæ* O.-Grant. I have now been able to examine additional material and also study further allied forms, and, therefore, offer the following notes. The Clapper Larks, which make the characteristic wing-claps when high in the air, form a distinctive group. Although currently placed under several species, I believe that probably only two species are involved in South and Central Africa, and it is questionable whether these overlap. I would rearrange them as follows :—

Mirafra apiata apiata (Vieillot).

General aspect above very grey.

Distribution.—South-western Cape Province. (Two examined.)

Mirafra apiata algoensis (Roberts).

Similar to *M. a. apiata*, but with the outer web of the primaries much more extensively rufous.

Distribution.—Eastern Cape Province. (Five examined from Knysna, Paarl, Port Elizabeth, Grahamstown, Hopetown.)

Mirafra apiata adendorffi Roberts.

Differs from the preceding in the strong admixture of rufous on the upper side, especially on the head-top.

Distribution.—Little Namaqualand to van Rhynsdorp district. (Six examined.)

Note.—This bird cannot be anything but a race of *M. apiata*, and forms a link between the grey-backed *M. apiata* group and the rufous-backed *M. a. hewitti* (Roberts) group.

Mirafra apiata hewitti (Roberts).

General aspect above deep rufous : some birds show a quite defined blackish barring above, especially when worn, indicating the affinity of this form to the preceding, which has much more grey above and is darker rufous below. Birds from the Transvaal are the darkest in this series, but there is too much individual variation to justify the recognition of further geographical races.

Distribution.—Orange Free State to North-west Cape Province at Vryburg, Barkley West, and Western Transvaal (Rustenburg, Pretoria, Waterberg, Nylstroom). (Thirty-eight examined.)

Mirafra apiata deserti Roberts.

Very similar to *M. a. hewitti* but rather paler rufous on the upper side ; somewhat variable, and a few birds hardly separable.

Distribution.—Damaraland Plateau (Gobabis to Okahandja, Omatako and Otjisundu. (Eight examined.)

Note.—Lynes (Rev. Zool. Bot. Afr. xxxi. fasc 1, 1938, p. 73.) lists birds from Kilembe and Petianga in the Belgian Congo and Chisengue and Missao de Luz in Angola as *Mirafra fasciolata*, of which Gyldenstolpe regards *M. hewitti* as a synonym. These specimens require re-examination before they can be regarded as *M. a. hewitti*. I am not satisfied that *M. fasciolata* does in fact refer to this form. Levaillant's figure of *Alauda rufipilea* appears to me to be unidentifiable.

Mirafra apiata kalaharica (Roberts).

In pattern like *M. a. hewitti*, but in colour quite different, being a pale pinkish sandy colour on the upper side.

Distribution.—Central Kalahari (Gemsbok Pan, Damarapan, Kuke). (Three examined.)

Note.—Two from Damarapan agree with the description of this race, but the third, from Gemsbok Pan, the type-locality, is actually more like *M. rufocinnamomea* in the pattern of the upper surface, though it has the tail pattern of *M. a. hewitti*. More evidence may show that the two species link up in Bechuanaland through this form and *M. rufocinnamomea mababiensis* (Roberts), which is remarkably like the present race in general tone.

The present assemblage of six races, in addition to having the characteristic wing-clapping habit, are larger than the next group—wings 78 to 94 mm.—and also whistle on the wing, a habit not found in most forms of *M. rufocinnamomea*.

Mirafra rufocinnamomea zombæ O.-Grant.

Distribution.—Zululand and Swaziland to the Eastern Transvaal (as far west as Olifants River, Pretoria), Southern Rhodesia (Bulawayo and Beatrice), Portuguese East Africa, Nyasaland, Northern Rhodesia east of the railway strip and via the Katanga west to Mwinilunga and north to the Kasai region of the Belgian Congo. (Fifty-six examined, including a series from Nyasaland.)

Note.—This is a remarkably uniform series as regards depth of colour, being distinctly reddish rufous on the upper side. One bird from Bulawayo

and one from the Transvaal are very dark and approach *M. a. hewitti* in colour.

Mirafra rufocinnamomea mababiensis (Roberts).

Very much paler than *M. r. zombæ*, being a very pale brownish sandy colour on the back, almost the same tone as *M. a. kalaharica*, but rather browner and less sandy coloured.

Distribution.—Ngamiland. (One examined.)

Mirafra rufocinnamomea damarensis Sharpe.

Much paler than *M. r. mababiensis*, the general aspect above being a whitish sandy colour.

Distribution.—Ovamboland. (Five examined.)

Mirafra rufocinnamomea lwenarum, subsp. nov.

Description.—Differs from *M. r. zombae* O.-Grant in being much paler above and below, the general aspect of the upper surface being a pale pinkish clay colour; differs from *M. r. mababiensis* (Roberts) in being darker, and lacking the sandy pallor of that race.

Distribution.—Balovale district west of the Zambesi River, Northern Rhodesia. East of the Zambesi River intergrades with *M. r. zombæ*.

Type.—In my collection. Male adult, collected between the Kasisi and Litapi Rivers, West Balovale district, Northern Rhodesia, on June 17, 1943, by K. Muzeya.

Measurements.—Wing, six males 80 to 85 mm.; seven females 77 to 82 mm., tail 52 to 57 mm.; culmen from base 17 to 18 mm., tarsus 23 to 25 mm., hind claw 6 to 7 mm.

A new Race of Shrike from Algeria.

Mr. W. H. Payn sent the following :—

Telephonus senegalus meinertzhageni, subsp. nov.

Description.—Differs generally from *Telephonus senegalus cucullatus* (Temminck) in being larger and darker, with longer and stouter bill and longer wing. Male and female.—Upper parts: hind neck and mantle deeper brown, less olive; rump darker, ashy brown, fringes of secondaries and primary coverts with rich chestnut as compared with the buff fringes of *T. s. cucullatus*; central tail feathers darker ash-brown and with more prominent barring. Underparts: breast and flanks considerably darker grey than *T. s. cucullatus*; grey colouring extends further up the throat; belly greyer, less white; cheeks and sides of neck darker grey. Soft parts: bill black, feet and legs dark grey, iris dark grey.

Distribution.—Only known at present from type-locality, but almost certainly occurs in suitable terrain in northern Tunisia and probably westwards into north-western Algeria. Occurs in thick *Arbutus*, *Erica* and *Ilex* scrub, on foothills of coastal range.

Type.—In my collection. Adult male obtained at Ain Mokra, 40 kilometres west of Bone, Algeria, and not far from the Tunisian frontier, February 22, 1944.

Remarks.—A series of five specimens, two males and three females, in unworn plumage, of the Bush-Shrike collected by me in north-eastern Algeria during the winter of 1943–44 exhibit such marked differences from the only other North African race of this bird, *T. s. cucullatus*, that I have described it as a new race after comparing it with a freshly moulted autumn series of the latter from Morocco. *Measurements.*—*T. s. cucullatus* : bill 11·5 to 13·5 mm., depth 7·5 to 8 mm., both sexes. Wing : male 85–89 mm., female 84 mm. *T. s. meinertzhageni* : bill from nostril to tip : male 14 to 14·5 mm., female 13·5 mm. Depth, both sexes, 8·5 mm. Wing : male 88 to 96 mm., female 87 to 90 mm.

New Name for Cisticola lais nyikae Benson.

Mr. C. W. Benson sent the following :—

Cisticola lais mariæ, nom. nov.,

for *Cisticola lais nyikæ* Benson, Ostrich, August, 1941, p. 28 : Nyika Plateau, Nyasaland ; not *Cisticola aberrans nyika* Lynes, Ibis, 1930, Suppl. p. 564 : Nyika Plateau, Nyasaland. The new name is in honour of my wife, Florence Mary Benson.

Notice.

The next Meeting of the Club will be held at the Rembrandt Hotel, Thurloe Place, S.W.7, on Wednesday, November 21, 1945. Dinner at 7 p.m., following which Mr. J. G. Harrison will read a paper on Bird Migration.

PURCHASED

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCLX.

The four-hundred-and-fifty-third meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, November 21, 1945, following a dinner at 7 P.M.

Chairman : Lt.-Col. C. W. MACKWORTH-PRAED.

Members present :—Miss C. M. ACLAND ; Miss P. BARCLAY-SMITH ; F. J. F. BARRINGTON ; Hon. G. L. CHARTERIS ; R. S. R. FITTER ; Miss E. GODMAN ; Captain C. H. B. GRANT ; B. G. HARRISON ; Dr. J. M. HARRISON (*Vice-Chairman*) ; J. G. HARRISON ; P. A. D. HOLLOM ; N. B. KINNEAR ; D. LACK ; Miss E. P. LEACH (*Hon. Treasurer*) ; Miss C. LONGFIELD ; Dr. P. R. LOWE ; Sir P. MANSON-BAHR ; G. M. MATHEWS ; E. S. MAY ; Col. R. MEINERTZHAGEN ; E. R. PARRINDER ; Miss G. M. RHODES ; B. B. RIVIÈRE ; B. B. ROBERTS ; H. N. SOUTHERN ; Lt.-Col. W. P. C. TENISON (*Editor and Hon. Sec.*) ; Dr. A. L. THOMSON ; B. W. TUCKER ; Mrs. H. W. B. WATT ; C. DE WORMS.

Guests :—Lord AMULREE ; H. B. COTT ; D. G. CROCKETT ; Monsieur J. DELAMAIN ; Miss C. E. GODMAN ; Major A. E. GURNEY ; Mrs. C. HARRISON ; E. O. HÖHN ; M. G. KAYE ; R. KELLOGG ; Mrs. RAIT KERR ; W. A. S. LEWIS ; D. A. T. MORGAN ; Lord W. PERCY ; A. G. B. RUSSELL ; G. WATERSTON.

Members, 31 ; Guests, 16. Total, 47.

Mr. J. G. HARRISON read a paper on some observations on Bird Migration (to be published in a subsequent Bulletin). This was discussed by by Messrs. A. L. Thomson, B. W. Tucker, R. S. R. Fitter and Lt.-Col. C. W. Mackworth-Praed.

Mr. W. S. LEWIS showed a colour film of Indian Bird Life taken in the neighbourhood of Calcutta and the Sunderbans, which was much appreciated.

A new Record for the Shetland Islands.

Mr. G. Waterston exhibited a specimen of *Phylloscopus trochiloides viridanus* obtained by Mr. Samuel Bruce in a cabbage field in the Shetland Islands on September 12, 1945.

Holland 1940–45.

Miss P. Barclay-Smith communicated a letter from Herr H. Buisman, in which he described the altered conditions of bird life as a result of the War. Minefields and inundations formed good sanctuaries during the war, but since the end of hostilities all means have been used to take birds and eggs. As a result "the situation for duck and geese is favourable, for smaller birds unfavourable, for birds laying eggs of a fair size bad, for birds liable to netting (mainly the same) bad as well. Quail has been detected in Western Friesland for first time, but the Corncrake is nearly gone. The Bittern is coming back, but the Kingfisher has disappeared. Swallows have decreased owing to the modernisation of farms. The exceptionally severe winters reduced all forms of bird life and the lack of food encouraged its wholesale destruction, such as catching thousands of diving Ducks in fishing nets set for the purpose. But Holland realizes that she has to protect the population of Duck, etc., of the whole northern part of Europe, and urgent steps are being taken".

A new Race of Yellow-fronted Canary from Abyssinia.

Capt. C. H. B. Grant and Lt.-Col. C. W. Mackworth-Praed exhibited and described :—

Serinus mozambicus gommaensis, subsp. nov.

Description.—Differs from *Serinus mozambicus grotei* Sclater and Praed in being darker. Above dull green, with usually yellow on forehead and stripe over eye less broad.

Distribution.—Abyssinia, except the Wallega area near the Sudan border.

Type.—In the British Museum. Adult male. Gomma, southern Abyssinia, May 12, 1905. Collected by Zaphiro, W. N. McMillan collection. Collector's No. 101. Brit. Mus. Reg. No. 1912.10.15.1698.

Measurements of Type.—Wing 69, culmen from base 13, tail 45, tarsus 16 mm.

Remarks.—This is a dark race which approaches the typical *Serinus mozambicus mozambicus* (Müller), from South Africa in general appearance.

A new Race of Long-billed Forest Warbler from Northern Portuguese East Africa.

Mr. C. W. Benson sent the following description :—

Apalis moreaui sousae, subsp. nov.

Description.—Similar to *Apalis moreaui* W. L. Sclater, from which it differs in having the whole upperside slightly darker olivaceous ; forehead, lores and ear-coverts darker, more chestnut-brown ; below greyer, especially on chest and flanks.

Distribution.—Njesi Plateau, 10 miles north of Unangu, northern Portuguese East Africa, in evergreen forest.

Type.—In the British Museum. Adult male. Njesi Plateau, 10 miles north of Unangu, northern Portuguese East Africa. August 12, 1945 ; collected by Jali Makawa for C. W. Benson. Brit. Mus. Reg. No. 1945. 25.3. Collector's No. 3842.

Measurements of Type.—Wing 50, culmen from base 17, tail 54, tarsus 22 mm.

Remarks.—Seven specimens were obtained. An adult female collected at the same locality on August 16, 1945, is similar to the male and measures : Wing 45, culmen from base 17, tail 46, tarsus 22 mm. Named in honour of Senor A. Baptista de Sousa, Provincial Commissioner at Vila Cabral, Portnguese East Africa.

A new Race of Hill Chat from Tanganyika Territory.

Mr. Hugh F. I. Elliott sent the following description :—

Pinarochroa sordida olimotiensis, subsp. nov.

Description.—Nearest to *Pinarochroa sordida hypospodia* Shelley, but not so sooty above, rather browner, but not the warmer brown of *Pinarochroa sordida ernesti* Sharpe. A distinct light stripe in front of the eye and above the lores.

Distribution.—Highlands of north-eastern Tanganyika Territory between Long. 35° and 36° E., at Engemat Crater, Olosirwa and Olimoti Mountains.

Type.—In the British Museum. Adult male. Olimoti Mountain, north of Ngorongoro, 9000 feet, north-eastern Tanganyika Territory, July 15, 1944. Collected by H. F. I. Elliott, Brit. Mus. Reg. No. 1945.19.1.

Measurements of Type.—Wing 75, culmen from base 18, tail 50, tarsus 32 mm.

Remarks.—Three adults and one young bird were obtained, two males and two females. The two females have a wing measurement of 75 mm. The young male shows the same difference of coloration when compared with a young male of *P. s. hypospodia*, as do the adults.

Notes on Western Palæarctic Birds.

Mr. P. A. Clancey sent the following communication :—

(1) *Fringilla cœlebs scotica* Harrison, 1937, Observations on some delitescent criteria perceptible in a fresh autumn series of topotypes.

Fringilla cœlebs scotica was described by Harrison, Bull. B.O.C. 1937, lvii. pp. 64–65, on breeding males collected at Carmunnock, Lanarkshire, south-west Scotland, and I have subscribed to the question of its validity in Ibis, 1938, pp. 747–748 ; 1940, pp. 93–94 ; 1943, p. 88. So far all communications on this form have been based on breeding birds, but a recent survey of fresh autumn examples from the typical locality has shown that it is clearly separable from *Fringilla cœlebs gengleri* Kleinschmidt, Falco, v. 1909, p. 13 : Hampstead, at this season of the year, and that Harrison failed to emphasize highly constant racial criteria in his original diagnosis, but as this was founded primarily on breeders this is excusable. I have found that only about 60 per cent. of breeding *F. c. scotica* are separable from similar examples of *F. c. gengleri* on account of their darker under surfaces and ear-coverts, but when effecting a comparison between a series of ten freshly moulted topotypes of *F. c. scotica* (Lanarkshire, October, 1945) and a series of twenty *F. c. gengleri* (Suffolk, Essex, and Wiltshire, 1940–1942) I found I was able to separate at least 90 per cent. of *F. s. scotica*. For the purpose of this short communication my observations have been confined to topotypical skins of *F. c. scotica* and Near Topotypes of *F. c. gengleri* collected during the months of September and October, and examples taken at a later date have been ignored on account of the highly promiscuous nature of the winter *Fringilla* population.

When viewed in good light it will be seen that fresh *F. c. scotica* differ from *F. c. gengleri* in their altogether browner and less richly coloured under surfaces and darker ear-coverts. Judging from Harrison's diagnosis one would expect to find a dark edition of *F. c. gengleri*, but this is scarcely true, and in many respects *F. c. gengleri* is a more brightly coloured bird, *F. c. scotica* being quite dull and brown in comparison. In *F. c. scotica* the buff apices to the feathers of the crown and nape are generally very much less warmly coloured and darker than those of the South England birds, this character being highly constant. The blue of the crown is frequently of a deeper tone in south-west Socttish bird, while the mantles are generally a deeper shade of brown and are rarely so rufescent as in *F. c. gengleri*, as already indicated by the author of *F. .c scotica* in the original description. I would also emphasize the value of the darker green of the rump in *F. c. scotica*, and the fact that the wings are of a

somewhat denser nuance leading to a more strongly contrasted wing pattern. These latter criteria are purely ancillary and must not be used alone when adjudging the validity of the race.

In conclusion, I am firmly of the opinion that *Fringilla cœlebs scotica* Harrison is a tenable form, especially in fresh autumn dress, and is confined to south-west Scotland.

I have compared the pale Sutherlandshire birds discussed already in Ibis, 1940, pp. 93–94, with the series under review, and their extreme pallor is of salient significance. On the production of further material from the extreme north of Scotland it may be found essential to introduce a name to cover these egregious types.

Notice.

The next meeting of the Club will be held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, December 19, 1945. Dinner at 6.30 P.M., following which Dr. L. Harrison Matthews will read a paper on "Antarctic Birds", with lantern slide illustrations.

PURCHASED

BULLETIN
OF THE
BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCLXI.

The four-hundred-and-fifty-fourth meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, December 19, 1945, following a dinner at 6.30 P.M.

Chairman: Mr. D. SETH-SMITH.

Members present:—H. G. ALEXANDER; F. J. F. BARRINGTON; A. W. BOYD; R. P. DONALDSON; C. J. DUFFIN; J. FISHER; R. S. R. FITTER; B. G. HARRISON; Dr. J. M. HARRISON (*Vice-Chairman*); J. G. HARRISON; R. E. HEATH; R. C. HOMES; N. B. KINNEAR; D. LACK; Miss E. P. LEACH (*Hon. Treasurer*); Miss C. LONGFIELD; J. D. MACDONALD; Lieut.-Col. C. W. MACKWORTH-PRAED (*Vice-Chairman*); G. M. MATHEWS; E. S. MAY; D. A. T. MORGAN; E. R. PARRINDER; C. W. G. PAULSON; Miss G. M. RHODES; B. B. ROBERTS; Major H. M. SIMONDS; H. N. SOUTHERN; Lieut.-Col. W. P. C. TENISON (*Editor and Hon. Sec.*); Dr. A. L. THOMSON; B. W. TUCKER; Mrs. H. W. B. WATT; C. DE WORMS.

Guests:—W. B. ALEXANDER; C. B. ASHLEY; Dr. J. BERRY; J. W. CADBURY; J. L. CHAWORTH-MUSTERS; Mrs. A. GUBBAY; Dr. L. B. HOPPER; R. S. JENYNS; Dr. N. A. MACKINTOSH; Dr. L. HARRISON MATTHEWS; Mrs. A. L. THOMSON; G. WATERSTON.

Members, 33; Guests, 12. Total, 45.

Dr. L. HARRISON MATTHEWS read a paper on "Antarctic Birds", illustrated by a large number of lantern-slides from photographs taken by him in South Georgia and South Orkney Islands. This was discussed by Messrs. G. M. Mathews, J. D. Macdonald and others, and was very much appreciated.

Exhibition of two Varieties of the Teal, Anas crecca crecca L.

Dr. J. M. Harrison exhibited two drake Teal, both obtained in Lincolnshire : the one is a type which has already been described and exhibits an incipient white neck ring as represented by a white patch at the root of the neck anteriorly. In other respects this bird is a normal specimen in full plumage. It was shot at Northcotes on January 27, 1931.

The second specimen, shot on November 24, 1945, at Marshchapel, is of particular interest. It is a bird of the year and is not quite through the moult. It will be seen that the face pattern is quite aberrant in that there is much pale whitish-ash on the throat below the dusky mental patch, and that at the root of the neck a dusky triangle extends upwards from this point with its apex directed towards the whitish-ash of the throat. The most remarkable feature, however, about this specimen is the bisection of the bay-coloured cheeks and sides of neck, by the whitish ash which borders the iridescent green of the eye patch below and extends downwards and round the base of the bill, and, to a less extent, backwards from this point bordering the dusky mental patch, and so running into the whitish-ash patch of the lower throat. Also it is to be noted that the tips of the feathers on the whitish markings dividing the bay-coloured cheeks and sides of neck are considerably speckled with dusky black, a situation in which, in the normal bird, no dusky markings are to be found.

This specimen is clearly not a mere colour aberration, nor is it a hybrid bird, while its urogenital organs were those of a normal male, and it is believed that both these specimens may represent atavistic individuals, the one possessing the incomplete white collar, a reversion towards *Anas platyrhyncha*, while the other specimen is reminiscent in its face markings to the Baikal Teal, *Anas formosa*.

Some Remarks upon Parus major newtoni Prazak and Parus major major L.

Dr. J. M. Harrison sent the following communication :—

Prazak's race of *Parus major* owes its subspecific identity to the more massive beak, which, it is stated, is more easy to see than to demonstrate

on measurement, and most workers are agreed that on colour, examples of *Parus m. newtoni* differ very little, if at all, from the Continental *Parus m. major*, though it is stated to be a trifle duller and darker. Hartert (Vög. der pal. Fauna, vol. i. p. 343) was unable to confirm this as a constancy, a finding with which my own investigations agree. The discovery in series of *Parus major* from the Continent, especially from Holland, of a certain number of birds with heavy bills, even amongst breeding examples, has prompted me to review a series of fifty British with a similar number of Continental birds in order, if possible, to determine the validity of the race *Parus m. newtoni* and assess more accurately the bill factor.

The Continental series include birds from Holland (8), Germany (7), Switzerland (28), and France (7). It will be noticed that I have avoided using material from south-eastern Europe and from south of the mountainous barrier of the Alps, for already in this part of the Continent, the species shows a departure from the typical form, particularly in the extreme south-east of the Balkan peninsula (Harrison and Pateff, "An Ornithological Survey of Thrace, the Islands of Samothraki, Thasos, and Thasopulo, in the North Aegean, and Observations in the Struma Valley and the Rhodope Mountains in Bulgaria", Ibis, July 1937, pp. 601–603). In order to endeavour to place the matter of bill size on a rather more exact footing than that of an unsatisfactory visual impression, careful measurements have been made in the two series of (*a*) bill length, as taken from base of skull, (*b*) width at nostrils, and (*c*) depth at nostrils, while an attempt to reduce the increase in mass of the bill to a factor, a bill coefficient figure, width × depth (*bc*) is given. This method was originally devised by Salomonsen in the determination of the races of the Oyster-catcher ("The European Forms of *Hæmatopus ostralegus* L.", Ibis, 1930, p. 57).

The figures obtained are instructive and support the evolutionary trend of the species towards *Parus m. newtoni* in north-west Europe, and show, in my opinion, the rather fluid nature of the population in southern England and the adjacent north-west region of the Continent. An interesting point is now brought to light during the examination of this material, for while, with the exception of two examples, one in the series from the Pyrenees and one from Germany, all the culmens of the Continental birds are decurved to strongly decurved, representing only a 4 per cent. exception rate, it was found that in the British series the number of birds with virtually straight culmens is far higher, the proportion of straight to decurved or slightly decurved culmens is as 29 to 21,

giving a 42 per cent. straight as against decurved culmens, another piece of evidence strongly suggesting that we are dealing with birds of mixed genetic constitution, in other words, with plastic material, with *Parus m. newtoni* seeking domination as a slightly longer and definitely heavier billed form with a straighter culmen.

The Dutch series shows mostly birds with shorter bills and decurved culmens, but some are massive in this respect rivalling *Parus m. newtoni*.,

It is well known that *Parus major major* occurs in the British Isles as a passage migrant and winter visitor in some numbers (' The Handbook of British Birds', vol. i. p. 245), and the possibility that some remain to breed cannot be lightly discounted, particularly when it is remembered that such is the case with certain other species, *e. g.*, Song-Thrush, White Wagtail and Blue-headed Yellow Wgatail, to mention but a few.

The characteristic difference in the culmen form in these two races is well shown in the woodcut (' The Handbook of British Birds,' vol. i. p. 246), and it seems strange that the biological significance and its possible interpretation has not been previously recognised. The periodic introduction into the south of England of birds with strongly decurved culmens would thus tend to perpetuate such stock with a consequent dilution of a character which appears to be seeking fixation in *Parus m. newtoni*. This would also explain the presence on either side of the English Channel of examples so poorly differentiated as to defy determination. Jeffery Harrison (Bull. B. O. C. xlv. pp. 26–27) has shown that the heavier bill obtains for birds from south-west Scotland, although in my series, all from the south of England, there are several with a bill width of 6·5 mm., while the greatest proportion of length is 13 mm., while three even attain to a length of 14 mm.

The ecological factors concerned with the tendency to increase in bill length and mass are not very clear, but the case is exactly paralleled by that of the Crossbill, an adaptive evolutionary trend correlated with the harder cones the latter species meets with in the more northerly part of its range—possibly some similar factor may be demonstrable in the case of *Parus m. newtoni*, though as the feeding habits of this species are less specialised the responsible factor is therefore rendered more obscure.

Conclusions :

This investigation supports, upon measurement, the validity of *Parus m. newtoni* and demonstrates the tendency to a longer bill, while measurements show that the increase in mass of the bill rests upon an increase in width rather than depth. These results are set out in

Tables I.–IV. It is to be noted that in treating with this investigation I have not considered it necessary to deal with the two sexes separately, and although the two series of fifty each are not excessively numerous they are, nevertheless, significant. The question of bill size and shape is reviewed over a wide area and in adequate series would probably yield results of a corroborative nature and may even be found to be correlated with both ecological and genetic factors. There is some evidence in the series examined that there is an overlap of *Parus m. major* and *Parus m. newtoni* in the south-east of England and in the Netherlands. It is apparent from the figures shown that there is an overlap and that some specimens cannot be assigned to one race or the other, and that the bill coefficient is of assistance in diagnosis, the dividing point is above or below 25, while it would appear that at the extremes the two forms are well differentiated. The overlap may represent an intermediate population. The figures suggest that individuals with a bill coefficient of 25 or under are *Parus m. major*, while above that figure they are *Parus m. newtoni*. Culmen length shows a very wide overlap, and is therefore unreliable as a subspecific character, though, as previously stated, showing a trend towards being longer in *Parus m. newtoni*. Culmen form likewise shows a tendency towards becoming fixed as a subspecific character in *Parus m. newtoni*.

Bill measurements, in mm., of *Parus major* Linnæus.

TABLE I.—*Culmen length.*

	10	10·5	11	11·5	12	12·5	13	13·5	14
British	0	0	2	3	14	6	22	0	3
Continental .	2	1	7	10	21	3	6	0	0

TABLE II.

		4	4·5	5	5·5	6	6·5
British	width.....	0	0	4	16	27	3
	depth.....	0	0	34	13	3	0
Continental	width.....	0	11	35	3	1	0
	depth.....	2	11	35	2	0	0

TABLE III.—*Bill coefficient.*

	20	20·25	22·5	24·25	24·5	25	25·5	27·5	30	30·25	30·5	30·75	33	35·75	36
British	0	0	0	0	0	4	0	13	17	2	1	2	7	1	3
Continental	2	6	7	1	1	27	0	4	1	0	0	1	0	0	0

TABLE IV.—*Culmen form.*

	Straight.	Decurved.	
British	21	29	= 42 per cent. straight.
Continental	2	48	= 4 per cent. straight.

Notes on Western Palæarctic Birds.

Mr. P. A. CLANCEY sent the following two communications :—

(2) The Type-locality of *Motacilla cinerea* Tunstall, 1771.

A recent survey of fresh autumn series of *Motacilla cinerea* Tunstall from many parts of Great Britain has shown that the species is not constant throughout its entire range, and that western Scottish birds may be separable from those from other regions on account of their darker upper parts and less richly coloured ventral surfaces. This being so, it is here considered advisable to restrict the type-locality of the *Motacilla cinerea* of Tunstall, Ornith. Brit. p. 2, 1771, still further, "England" being too general.

Tunstall gives no locality, but as he lived and collected in northern England it can be safely assumed that his *Motacilla cinerea* came from that region, and I propose to restrict the type-locality to Wycliffe, Yorkshire, England—a district in which he spent many of the most productive years of his life.

(3) The Type-locality of *Turdus viscivorus* Linnæus, 1758.

British *Turdus viscivorus* Linnæus series exhibit considerable colour variation, but in general birds from southern and eastern England tend to give the impression of pallor when compared with examples from the western regions of Scotland, which are darker and richer, with

considerable rusty wash on the rump and upper tail-coverts. North of Scotland and Irish birds resemble English ones in being pale. Further study of the British group may culminate in the separating of new subspecies, but in the meantime I consider it essential that the type-locality of the nominate form, generally given as " England ", be still further restricted.

Linnæus's first reference on p. 168 of the ' Systema Naturæ ', ed. x. 1758, is Ray, av. 64. N.1. A sedulous conning of apposite literature has not enabled me to locate information which would permit of a ready fixing of the type-locality, and I am of the opinion that we must resort to a fixation based on Ray's movements. Ray travelled widely, but had extremely close associations with Cambridge and Essex. For the purpose of future racial research into the group I propose to restrict the type-locality of *Turdus viscivorus* Linnæus, 1758, to the county of Essex, England.

Notice.

The next meeting will be held at the Rembrandt Hotel, Thurloe Place, South Kensington, on Wednesday, January 16, 1946. Dinner at 6.30 P.M., following which Dr. Hugh B. Cott will read a paper on " Coloration and Edibility of Birds ", with lantern slide illustrations.

26 APR 1946
PURCHASED

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCLXII.

The four-hundred-and-fifty-fifth meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W.7, on Wednesday, January 16, 1946, following a dinner at 6.30 P.M.

Chairman: Mr. D. SETH-SMITH.

Members present:—Miss C. M. ACLAND; Dr. D. A. BANNERMAN; Miss P. BARCLAY-SMITH; F. J. F. BARRINGTON; Hon. G. L. CHARTERIS; R. P. DONALDSON; R. S. R. FITTER; Miss E. GODMAN; B. G. HARRISON; J. G. HARRISON; R. E. HEATH; P. A. D. HOLLOM; R. C. HOMES; Major-General H. P. W. HUTSON; D. LACK; Miss E. P. LEACH (*Hon. Treasurer*); Miss C. LONGFIELD; Dr. G. CARMICHAEL LOW; J. D. MACDONALD; Lt.-Col. C. W. MACKWORTH-PRAED (*Vice-Chairman*); G. M. MATHEWS; D. A. T. MORGAN; E. M. NICHOLSON; E. R. PARRINDER; Miss G. M. RHODES; B. B. ROBERTS; Lt.-Col. W. P. C. TENISON (*Editor and Hon. Sec.*); Dr. A. LANDSBOROUGH THOMSON; B. W. TUCKER; Mrs. H. W. BOYD WATT; C. DE WORMS.

Guests:—Mrs. E. BARNES; R. CHANCELLOR; Dr. H. B. COTT; P. W. C. CURRIE; Mrs. FITTER; Miss C. E. GODMAN; E. S. HARRIS; Dr. E. C. HOHN; H. G. D. LEWIN; Lt.-Comdr. P. SCOTT; W. J. PLOWDEN-WARDLOW; Major G. H. R. PYE-SMITH; Dr. W. H. THORPE.

Members, 32; Guests, 13. Total, 45.

Dr. HUGH B. COTT read a paper on "Coloration and the Edibility of Birds", in which he described his experiments relating to the comparative edibility of the flesh of birds, tested primarily by its attractiveness to hornets in North Africa and Sinai. This was very much appreciated and many members took part in the discussion which followed.

Exhibition of a Variety of the Teal, Anas crecca crecca Linn.

At the last meeting Dr. J. M. Harrison showed two varieties of the above species which were believed to be examples of atavism. Owing to his absence, through illness, Mr. Jeffery Harrison exhibited for him a third example which was shot on a North Kent marsh on December 22, 1945. This specimen is a first winter drake which has not quite completed its moult. In this bird it will be noticed that the whole of the under parts are strongly and evenly spotted instead of showing the usual sharp line of demarcation between the spotting of the breast and the pure white of the belly of the normal drake Teal. What the significance of this type of plumage is it is difficult to state. He believed it was an accepted fact that the juvenile plumage—and possibly this may also be extended to include the first winter dress—tends to throw back to a primitive type. It is also well known that the juvenile plumages of most birds are of the spotted or streaked type. If this is so, then the bird under consideration may well represent yet another instance of an atavistic expression towards a primitive type of plumage. It is certainly of interest, and possibly of significance, that all these three birds are as yet subadult, and one can only speculate as to whether such aberrant characters are reproduced at subsequent moults and in the adult bird.

Overland Migration of Wading Birds in the Southern Half of England.

Mr. Jeffery Harrison read the following paper at the meeting on November 21, 1945:—

The subject of this communication is the result of observations made on the Cambridge and Guildford sewage farms during the last four years.

The fact that good numbers of wading birds migrate across England has become well known now that a large number of sewage farms and reservoirs, offering ideal feeding and resting grounds, are to be found throughout England. Indeed, observations on these places have shown that most species of wading birds which are commonly seen on migration on the coast are also to be found inland.

A great deal of most excellent field work has been done on some sewage farms, but, so far as I am aware, no one has ever carried out a series of day-to-day observations on two widely separated farms with the object of comparing migration. It was not until the spring of 1944 that the opportunity for me to do this became possible. At the time I was working at Guildford in Surrey, which has a small farm to the north of the town. Thanks to the keen co-operation of Philip Burns and other

members of the Cambridge Bird Club, I was able to get daily observations from the famous sewage farm at Cambridge throughout May, while I did the same at Guildford.

The farm at Guildford lies roughly eighty-five miles due south of the one at Cambridge. Both are worked on the same principle, that is, they are divided off into sections, consisting of shallow pits, which are flooded alternately and then allowed to dry out. The Cambridge farm has an area of two hundred acres, while the one at Guildford is not quite half as large, with an area of just under a hundred acres of suitable land.

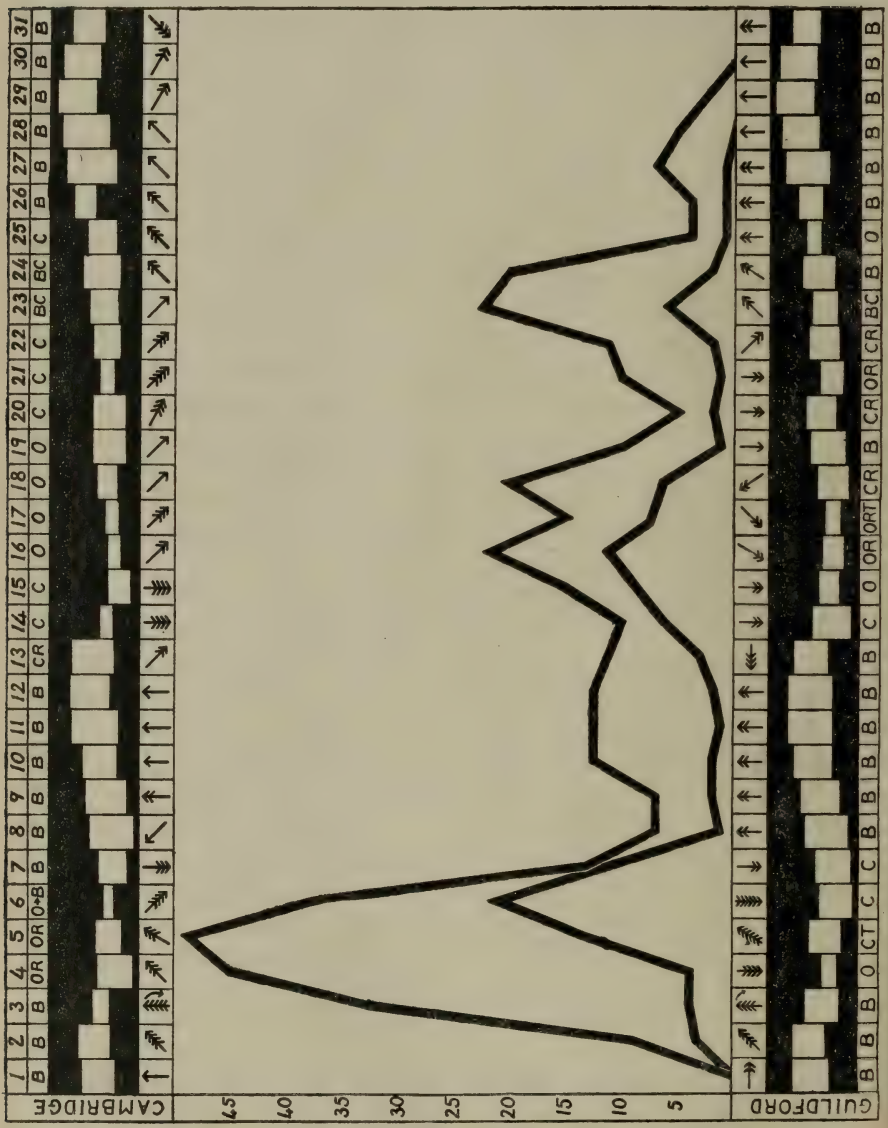
Throughout May 1944, when the spring passage was at its height, we counted the total number of migrant waders present each day. Migrant waders were taken to include all those which do not breed locally ; that is to say, we excluded Common Snipe, British Redshank, Green Plover and Curlew. At the end of the month we drew up Graph No. 1, combining our observations, together with very brief notes of the weather each day. The top graph represents the migration as recorded at Cambridge each day, and the lower one represents the migration at Guildford. At no time were there as many migrant waders at Guildford as at Cambridge, and this can be accounted for by the difference in the acreage of available feeding grounds. I must admit that I was very surprised to see how similar were the two graphs when they were produced. The first peak occurred one day earlier at Cambridge, while the other two peaks both correspond to the day.

We attempted to produce a similar series during the autumn migration that followed, but my observations were not complete owing to interruptions. In any case, autumn migration is not in any way easy to follow in detail, because there is no " rush " in autumn as in spring and the numbers involved are far bigger, and so errors tend to increase.

I should add at this point that, although, so far as I am aware, this sort of comparison has not been done before, David Lack records in his ' Birds of Cambridgeshire ' that on several occasions unusual wading birds have been seen on the same day on the Cambridge farm and at Tring, and coincidence of arrival has also been noted, of unusual species, between Tring and Cheshire farms and between Cambridge and the Isle of Lundy, while in 1944 my father and I saw Grey Plovers on the same day at Sevenoaks and at Guildford, these being the only records for the two localities. Isolated records are nothing to argue on, and in any work of this sort observations must be made on the common migrants which occur regularly throughout the migration and can be relied upon to give an accurate reflection of the whole migration.

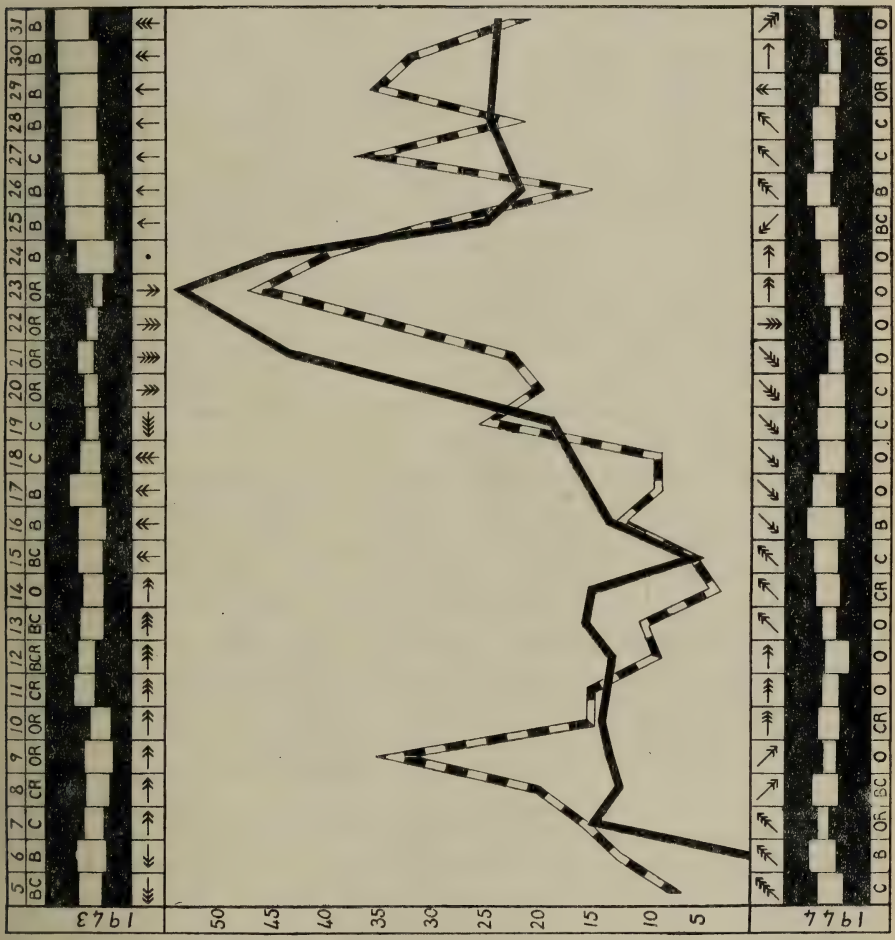
It does seem to me that if a number of similar observations to these of May 1944 were to be carried out at suitable spots in the British Isles,

quite a good deal might be learnt about migration routes or waves that cover these islands. For instance, it would seem that Guildford and Cambridge are included in the same wave of migration in spring.


CAMBRIDGE
GUILDFORD
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
B B B OR OR O-B B B B B B CR C C O O O C C C BC BC C B B B B B
B B B O CT C C B B B B B B B C O OR|OR|T|CR| B |CR|OR|CR|BC|BC B O B B B B B
45 40 35 30 25 20 15 10 5

Graph No. 1.—This indicates the number of migrant wading birds counted on the Cambridge (upper tracing) and Guildford (lower tracing) sewage farms on each day during the month of May 1944.

The effects of weather conditions have been much in debate recently. I have always kept notes on this, both at Cambridge and Guildford, so a few remarks on this may not be out of place.



Graph No. 2.—This indicates the number of migrant wading birds counted daily on the Cambridge sewage farm during the month of July on the two successive years 1943 (solid line) and 1944 (broken line).

Symbols.—Above and below each graph are three rows of symbols. From without inwards, they represent each day :—

(1) Sky conditions. B, blue sky ; C, cloud ; O, overcast ; R, rain ; T, thunder.

(2) Maximum and minimum temperatures, on a scale ranging in Graph No. 1 from 25° to 90° F. and in Graph No. 2 from 30° to 95° F.

(3) Wind direction and approximate strength, the latter indicated by the number of barbs to the arrow. Four barbs would indicate a strongish wind, seven a full gale.

For studying migration, a sewage farm has many advantages over the sea-coast. The numbers involved are small, and, therefore, easy to count and keep a check on. Furthermore, they do not vary with high and low tides. It must be realized that all the birds seen on a farm are the ones that have stopped migrating for the time being, either because they are held up by the weather or else because they are tired. Nevertheless, the waders seen on a farm do give an accurate reflection of any migration that may be going on.

Briefly, I have found that low cloud, rain and thunderstorms have the most adverse effect on migration, and it is under these conditions that the most migrants will be seen. As to the wind, that most debated subject in spring, I found that the migrants tend to push on, whatever the direction, unless it was in gale force against them. In the graph of May 1944, the first peak corresponds with severe thunderstorms on May 5 and 6; the second peak, on May 16, with low cloud, rain and a north-west wind, and the last peak was the culmination of four cloudy days, with some rain and strong northerly winds.

In autumn, on the other hand, there is a very decided tendency for migration to take place into the wind, as Dr. Norman Joy has recently shown at Dungeness. This was especially noted in the autumn of 1943 by Martin Kaye and myself at Cambridge. On Graph No. 2 it will be seen that the first migrants appeared on July 7, 1943, and continued to pass through in small numbers until July 18. From July 19 until July 23 migrants were held up, the wind being north at the time, (*i.e.* a following one), and there was some cloud and occasional rain. On July 24 the wind changed to south, the weather became finer and many of the migrants moved at once. This included various individual birds that we had been able to keep under observation and recognize each day—an adult Curlew-Sandpiper in transitional plumage, a similar Ruff, and several others, as well as small flocks of Dunlin, Green and Common Sandpipers, etc.

Much the same thing occurred again at Cambridge in the following autumn, and this has been incorporated in the same graph. This gives a very good idea of the type of migration that takes place across England in July, starting usually toward the end of the first week and reaching a climax towards the end of the third week, when many adults come through and the first of the youngsters.

When interpreting results, it must be remembered that winds with northerly or easterly components are more frequent in spring, whereas in autumn, winds with southerly or westerly components tend to be predominant. The fact that waders tend to migrate into the wind in autumn may seem to be a rather uneconomical method of conserving

energy on a long and exhausting flight, and, indeed, when Dr. Joy recently published his observations in 'The Field' a large number of letters were subsequently published dealing with this. I do not intend to enter into the controversy, except in so far as to support Dr. Joy's observations, which certainly agree with my own.

In conclusion, I would like to express my thanks to Martin Kaye, who was my co-worker at Cambridge, and to David Crockett, who has taken so much trouble in preparing the two graphs for publication. I would also like to acknowledge the kind help given by the Botanic Gardens, Cambridge, and by E. T. Fulk, Esq., F.B.O.A., of Guildford, in supplying valuable meteorological data.

Notes on Eastern African Birds.

Captain C. H. B. Grant and Mr. C. W. Mackworth-Praed send the following four notes:—

(1) On the Generic Status of *Ortygops macmillani* Bannerman.

In the Bull. B. O. C. lxii. 1941, p. 32, we discussed the conspecific status of this bird and *Coturnicops ayresi* (Gurney). We have now been able to examine an adult male from Entotto, near Adis Abeba, Abyssinia, kindly lent to us by the Coryndon Museum, Nairobi, and this confirms the fact that the bills are in no way dissimilar to those of the genus *Sarothrura*, and that the bird differs from that genus only in the white secondaries. In addition, we now know something of the habits of this Rail, which is not uncommon locally in the Abyssinian highlands, and they also in no way differ from the habits of other members of that genus.

We therefore see no good reason for retaining this species in the genus *Coturnicops*, and place it in the genus *Sarothrura*.

(2) On the Plumages of *Coracias spatulatus* Trimen.

The bird described by Dresser as *Coracias weigalli* in Ann. & Mag. Nat. Hist. (6) vi. 1890, p. 351: Newala, southern Tanganyika Territory, has always presented a difficulty, and Dr. Roberts, in correspondence with the British Museum (Natural History) in 1935, argued that it was a distinct species, and so retains it in his 'Birds of South Africa', 1940, p. 169. The National Collection now contains thirty-seven apecimens of *C. spatulatus*, and of these, three adults are in the dress of *C. weigalli*. One is from the Masasi district, southern Tanganyika Territory (Brit. Mus. Reg. no. 1944.11.6.14), one from the Mozambique Province, northern Portuguese East Africa (Brit. Mus. Reg. no. 1933.3.1.226), and one from Nyasaland (Brit. Mus. Reg. no. 1899.1.2.12.)

The Nyasaland bird is in moult and shows new lilac-coloured feathers coming in on the chin to upper belly.

There is no doubt that the young bird of *C. spatulatus* has the chin to upper belly brownish lilac, and an undoubtedly young bird from Kilosa, Tanganyika Territory (Brit. Mus. Reg. no. 1940.1.12.61) is moulting and blue feathers are coming in on the chin to upper belly.

Another undoubted young bird from Lundazi, Northern Rhodesia, (Brit. Mus. Reg. no. 1936.9.5.16) is moulting into adult dress and has no lilac-coloured feathers left on the chin to upper chest.

The two specimens collected by Vincent in Portuguese East Africa are not identical in markings : the one from 20 miles west of Ribaué agrees with *C. weigalli*, but the other has the whole centre of the chin and upper belly blue, the lilac colour being confined to the sides of the face, neck and chest. Indication of lilac on the sides of the face and on the sides of the neck and chest is found in specimens from the south-eastern Belgian Congo, Northern Rhodesia, Nyasaland and eastern Southern Rhodesia alongside specimens that have these parts wholly blue except for a small patch of lilac behind the ear-coverts. Another adult in the *C. weigalli* plumage, from Pantamstenka, Matabeleland (Brit. Mus. Reg. no. 1879. 9.9.43), is in moult and has new blue feathers coming in from the chin to upper belly. Two adult birds from Tanganyika Territory and one from the south-eastern Belgian Congo with wholly blue chin to upper belly are moulting and new blue feathers are coming in on those parts.

We now have definite proof that the young bird has a lilac chin to upper belly, sides of face and neck. We also find that adults vary in the amount of lilac on the sides of the face, neck and chest. We also find adults in the plumage of *C. weigalli*, one of which is assuming fresh *C. weigalli* plumage on the chin to neck, and another which is assuming fresh *C. spatulatus* plumage on the chin to neck.

It is true that birds in *C. weigalli* plumage have only so far been seen from southern Tanganyika Territory, Portuguese East Africa, Nyasaland and eastern Southern Rhodesia, but other specimens from the Kondoa Irangi and Nyamanyere districts, Tanganyika Territory, Portuguese East Africa and Nyasaland are in normal *C. spatulatus* plumage. The above evidence shows that the *C. weigalli* type of plumage is not that of a distinct species, but is a colour phase of *C. spatulatus*.

(3) On the Status of *Platysteira peltata jacksoni* Sharpe, Ibis, 1891, p. 445 : Sotik, western Kenya Colony.

Sharpe compared this race with *Platysteira cyanea* (Müller), and not with either *Platysteira peltata* Sundevall or *P. p. mentalis* Bocage. We have measured the series in the British Museum Collection and find that Angolan birds have a wing of, in four males, 67–73, and in three

females 68–71 mm. Birds from Northern Rhodesia to Uganda and western Kenya Colony have a wing of, in eleven males, 65–70, and in ten females 65–70 mm. The eastern birds from Uganda and western Kenya Colony have, in males, wing 68–70, and in females 69–70 mm. There is no difference in size, nor can we see any difference in either markings or colour.

We are therfore of opinion that *Platysteira peltata jacksoni* Sharpe must become a synonym of *Platysteira peltata mentalis* Bocage.

(4) On the Status of *Erythropygia zambesiana* Sharpe.

In Bull. B. O. C. lxi. 1940, p. 19, we placed this as a race of *Erythropygia leucophrys* (Vieillot), following Sclater, Syst. Av. Æthiop. ii. 1930, p. 482.

Roberts, Bds. S. Afr. 1940, p. 245, places *E. leucophrys* and *E. zambesiana* as separate species, and with this we agree, as both occur in eastern Southern Rhodesia. *Erythropygia zambesiana* Sharpe is the species that occurs in Eastern Africa.

Notice.

The next meeting will be held at the Rembrandt Hotel, South Kensington, on Wednesday, February 20, 1946. Dinner at 6.30 P.M., following which Mr. Gregory M. Mathews will read a paper on the " Birds of Canberra, Australia ", with epidiascope illustrations.

BULLETIN

OF THE

14 APR 1946

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCLXIII.

The four-hundred-and-fifty-sixth meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, February 20, 1946, following a dinner at 6.30 P.M.

Chairman: Mr. D. SETH-SMITH.

Members present:—Miss C. M. ACLAND; Miss P. BARCLAY-SMITH; F. J. F. BARRINGTON; A. G. BROWN; Hon. G. L. CHARTERIS; C. T. DALGETY; R. P. DONALDSON; C. J. DUFFIN; R. S. R. FITTER; Captain H. A. GILBERT; Miss E. GODMAN; B. G. HARRISON; Dr. J. M. HARRISON (*Vice-Chairman*); J. G. HARRISON; R. E. HEATH; Major-General H. P. W. HUTSON; Miss E. P. LEACH (*Hon. Treasurer*); Miss C. LONGFIELD; Dr. G. CARMICHAEL LOW; C. W. MACKWORTH-PRAED (*Vice-Chairman*); J. H. MCNEILE; Sir PHILIP MANSON-BAHR; G. M. MATHEWS; Col. R. MEINERTZHAGEN; E. M. NICHOLSON; Lt.-Col. W. A. PAYN; Mrs. J. B. PRIESTLEY; Miss G. M. RHODES; B. B. ROBERTS; Lt.-Col. W. P. C. TENISON (*Editor and Hon. Sec.*); Dr. A. LANDSBOROUGH THOMSON; B. W. TUCKER; Mrs. H. W. BOYD WATT; C. DE WORMS.

Guests:—Dr. J. BERRY; Miss T. CLAY; R. A. H. COOMBES; Mrs. M. V. GILBERT; Miss O. M. GILBERT; T. R. GODDARD; Miss C. E. GODMAN; Miss A. GUBBAY; R. S. JENYNS; Miss E. MCEWAN; Mrs. MACKWORTH-PRAED; Miss J. MACKWORTH-PRAED; E. L. PARISH; G. H. R. PYE-SMITH; PETER SCOTT; G. WATERSTON.

Members, 35; Guests, 16. Total, 51.

The CHAIRMAN reported the death of Major S. S. Flower, O.B.E. (*Chairman*, 1930–1932). Members stood for a few moments in remembrance.

Exhibition of a new Race of Sky-Lark.

The HON. SECRETARY exhibited specimens of a new race of Sky-Lark proposed by Mr. P. A. Clancey, see page 42.

An Account of the Birds of Canberra

Mr. Gregory Mathews gave a very interesting account of the " Birds of Canberra, Australia ", illustrated by a number of coloured plates projected by epidiascope. This was very much appreciated by the large audience present.

Notes on Western Palæarctic Birds.

Mr. P. A. Clancey sent the following two notes :—

(4) A new Race of Sky-Lark from Salisbury Plain.

Writing in the Bull. B. O. C. lxiii. 1942, pp. 39–41, I suggested that several new races of *Alauda arvensis* Linn. awaited description. Fresh autumn material available is insufficient to enable me to append names to all suspected British forms at the present time, but the copious series of moulting birds from Salisbury Plain, Wiltshire, has enabled me to work out satisfactorily a highly distinctive race confined to this interesting region, and for it I propose the name :—

Alauda arvensis tertialis, subsp. nov.

Description.—Separable from *Alauda arvensis arvensis* Linn. Systema Naturæ, ed. x. i. p. 165, 1758 : Sweden, on account of the rich, rufescent upper parts, wings and tail, as opposed to the warm brown of these parts in the typical race. Pectoral region copiously suffused with rufous, as are the flanks. Ventral surfaces strongly washed yellowish.

Compared with *Alauda arvensis scotica* Tschusi, Orn. Jahrb. xiv. p. 162, 1903 : Kirkcudbrightshire, S.W. Scotland, the characteristically rufous pigment of the new form is diagnostic. Decidedly redder than any other known race of *Alauda arvensis* Linn.

Distribution.—Confined to the Salisbury Plain, Wiltshire, England.

Type.—Male, adult by skull. Artillery Ranges, Larkhill, near Amesbury, Wiltshire, England, September 11, 1942. Moult. In my collection.

Measurements of Type.—Wing 112·5, culmen 17, tail 70, tarsus 26 mm.

Material examined.—Alauda arvensis tertialis, 15 ; *Alauda arvensis arvensis* from England (Sussex, Kent) 20, Continental sources, a considerable series ; *Alauda arvensis cantarella,* 2 ; *Alauda arvensis cinerascens,* 2 ; *Alauda arvensis scotica,* 10.

Remarks.—Careful comparison between S.E. England (Sussex, Kent) and N. European birds shows that the type inhabiting the former area is racially separable on colour.

Many authorities have subscribed to the theory that the British bird is separable from the nominate form, and I am glad to be in a position to confirm this. I feel no name should be given to the S.E. England

birds until further series of autumn birds are available, and the range limitations of *Alauda arvensis tertialis* are firmly established.

(5) *Parus major newtoni* Prâzak and *Parus major major* Linn. in S.E. England.—Notes on extensive series from Suffolk and Essex.

In the ' Conclusions ' to his instructive thesis on *Parus major newtoni* Prazak and *Parus major major* Linn. Bull. B. O. C. lxvi. 1946, pp. 24–28, Dr. J. M. Harrison states ' There is some evidence in the series examined that there is an overlap of *Parus m. major* and *Parus m. newtoni* in the south-east of England and in the Netherlands.

I have for long been trying to grapple with the complex racial problem presented by extensive series of this species amassed in the counties of Suffolk and Essex during the period September 1940 to November 1941. The mixed collection from this region is clearly separable from the homogeneous populations of more western districts of England on points of beak structure and minutiæ of plumage coloration. When compared with material from Germany, Austria and Switzerland it can be seen that they have, in series, characteristics in common with the continental group. It is, therefore, quite evident that a belt of intergrades between *Parus major newtoni* and *Parus major major* is found in the littoral of Suffolk and Essex, S.E. England, and from evidence at my disposal, racial inconstancy in *Parus major newtoni* can be met with as far inland as Hertfordshire, and doubtless other areas.

One point I would like to stress is the value of the mantle colour character in *Parus major newtoni*. Hartert, Witherby, and now Harrison, have averred that the darker and greener mantle of the British race is a weak and unreliable racial criterion. I cannot agree with this. If sample series from areas in England, distantly removed from the localities just discussed, are compared with topotypical specimens of *Parus major major*, the altogether deeper and less yellow green shade of the mantle in the British race can be fully appreciated. It is quite evident that inconstant series have been used by workers in the past.

A new Race of Barbet from Angola.

Mr. C. M. N. White sent the following description :—

Pogoniulus chrysoconus mayri, subsp. nov.

Description.—Similar to *Pogoniulus chrysoconus extoni* (Layard) but smaller, and more strongly washed with yellow on the throat and breast.

Distribution.—The Kasai district of the Belgian Congo, south along the Kasai to Dundu in North-east Angola.

Type.—Male adult collected at Dundu, Angola, on 17 February 1944, in my collection.

Measurements.—The wing of this new race measures 55–60 mm. in a series as compared with 59–66 mm. in a series from south of the Zambesi River, *P. c. rhodesiae* C. Grant * does not seem separable from *P c. extoni* : the wing measures 59–63 mm. in a long series, and the breast averages a little brighter than South African birds, but many are not separable. However, the Kasai population seems quite well marked.

The Adult of Mrs. Moreau's Warbler.

SCEPOMYCTER WINIFREDÆ (Moreau).

Mr. R. E. MOREAU sent the following note :—

In the Bull. B. O. C. lviii. 1938, p. 139, I described under the name *Artisornis winifredæ* a single male bird suspected to be immature. This was done after referring the specimen to authorities in the American and Berlin Museums. I was not at all satisfied with the placing of this species in the genus *Artisornis* and, subsequently, a good anatomical reason was found for transferring it to a new genus, *Scepomycter* Grant and Mackworth-Praed, Bull. B. O. C. lxii. 1941, p. 30.

Two adult breeding males have now been obtained by Charles Abdallah in the dry evergreen forest on the west side of the southern half of the Uluguru Mountains, at about 7000 feet, some 20 miles south-west of the type-locality, but in a much drier type of forest. The adult male differs from the immature as follows :—

Entire head, throat and chest chestnut, centre of breast and upper belly rather buffy ; rest of upper parts dark grey with an olivaceous wash ; wings and tail dusky black with an olivaceous wash on outer edges of the primaries and outer tail-feathers ; breast and belly dusky with a slight olivaceous wash ; bill black, extreme tip and base of lower mandible paler, eyes described by the collector as dark brown.

The circumstances in which these specimens were obtained are :—When I was in this very steep dry evergreen forest for a few days some years ago, I repeatedly heard a bird-call that reminded me strongly of that of the big Shrike *Malaconotus blanchoti blanchoti* Stephens, and I thought it most likely that it was made by the curious *Malaconotus alius* Friedmann. It was on this clue that I sent Charles Abdallah to this part of the Uluguru Mountains hoping to obtain *M. alius*. But he reports that the soft whistle I heard belongs to *Scepomycter*, and that in fact he got the second specimen to come within shot by imitating that noise. Here is another point distinguishing this bird, for I have not come across any other member of the Sylviidæ that utters anything like the long whistle of the Shrike.

* See Ibis, 1938, p. 347.—EDITOR.

Notes on Eastern African Birds.

Captain C. H. B. Grant and Mr. C. W. Mackworth-Praed sent the following two notes :—

(1) On the Conspecific Status of *Pycnonotus tricolor* (Hartlaub) and *Pycnonotus xanthopygos* (Hemprich and Ehrenberg) :—

In the Bull. B. O. C. lxvi. 1945, p. 7, we drew attention to the fact that the African mainland birds should be attached to *P. xanthopygos*, which is a black-headed bird. Dr. J. M. Winterbottom has recently presented to the British Museum (Natural History) a long and interesting series from Northern Rhodesia, and these show that *Pycnonotus tricolor tricolor* and *Pycnonotus xanthopyga layardi* Gurney, occur together at Mongu and Mankoya. Therefore they must now be treated as separate species, and the races we recognise in Eastern Africa are as follows :—

Pycnonotus xanthopygos layardi Gurney.

Pycnonotus layardi Gurney, Ibis, 1879, p. 390 : Rustenburg, Western Transvaal, South Africa.

Top of head black.

Distribution.—Nyasaland, the Zambezi River Valley, and Northern Rhodesia to the Transvaal, Eastern Cape Province and Natal.

Pycnonotus xanthopygos micrus Oberholser.

Pycnonotus layardi micrus Oberholser, Proc. U.S. Nat. Mus. xxviii, 1905, p. 891 : Taveta, south-eastern Kenya Colony.

Above rather darker than *P. x. layardi*.

Distribution.—Coastal areas of Kenya Colony from Malindi and Tanganyika Territory as far west as Arusha district and Tabora, south to Portuguese East Africa, but not reaching to Zambezi River ; also Zanzibar and Mafia Islands.

Pycnonotus tricolor tricolor (Hartlaub).

Ixos tricolor Hartlaub, Ibis, 1862, p. 341 : Angola.

Top of head blackish brown, but not the black of *P. xanthopygos layardi* and *P. x. micrus*.

Distribution.—Northern Cameroon and the Sudan to western Tanganyika Territory, Angola, northern Damaraland, Belgian Congo and Northern Rhodesia.

Pycnonotus tricolor fayi Mearns.

Pycnonotus layardi fayi Mearns, Smiths. Misc. Coll. Wash. lvi. no. 20, 1911, p. 7 : Fays Farm, Njabini, near Mt. Kanankop, Aberdare Mts., western Kenya Colony.

Top of head and sides of face and throat darker than *P. t. tricolor*, but not the black of *P. x. micrus*.

Distribution.—Kenya Colony and Tanganyika Territory, from Mt. Elgon and Mt. Kenya, to Athi and Loliondo, also Rusinga Island, Lake Victoria.

Note.—Dr. Winterbottom's specimens also show that *Pycnonotus annectans* Roberts and *Pycnonotus xanthopygos layardi* occur together at Livingstone, and should, therefore, be treated as separate species. It would be better to treat *Pycnonotus tricolor* as a separate species to *Pycnonotus annectans* of which *P. t. vaughanjonesi* White, would appear to be a race.

(2) On the Status of *Neocossyphus rufus arrhenii* Lönnberg, Ark. Zool. x. no. 24, 1917, p. 30 : Beni, eastern Belgian Congo.

Lönnberg compared this race to *Neocossyphus rufus rufus* (Fischer and Reichenow), J. f. O. 1884, p. 58 : Pangani River, eastern Tanganyika Territory, and to the description of *Neocossyphus rufus gabunensis* Neumann, Bull. B. O. C. xxi. 1908, p. 77 : Ohumbe, Lake Onange, Ogowe River, Gabon, and therefore presumed that the latter only differed from the former in size and not in colour. Lönnberg's description and measurements agree perfectly with eight adult specimens of *N. r. gabunensis* in the British Museum, and although we have not seen specimens from the eastern Belgian Congo we feel sure that *Neocossyphus rufus arrhenii* Lönnberg, is a synonym of *Neocossyphus rufus gabunensis* Neumann. Sclater, Syst. Av. Æthiop. ii. 1930, p. 447, places it as doubtfully distinct.

Notice.

The next meeting will be held at the Rembrandt Hotel, South Kensington, on Wednesday, March 20, 1946, in conjunction with the Annual General Meeting of the British Ornithologists' Union. Dinner at 6.30 P.M., following which Capt. G. K. Yeates will exhibit some of his photographs.

BULLETIN

1 APR 1946

OF THE PURCHASED

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCCLXIV.

The four-hundred-and-fifty-seventh meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W.7, on Wednesday, March 20, 1946, following a dinner at 6.30 P.M., in conjunction with the Annual General Meeting of the British Ornithologists' Union.

Mr. N. B. KINNEAR, the President of the Union, took the chair at the dinner, and Mr. C. W. MACKWORTH-PRAED, Vice-Chairman of the Club, at the subsequent meeting.

Members of the Union present :—Major G. AYLMER ; Lieut.-Col. F. M. BAILEY ; T. L. BARTLETT ; Dr. H. M. S. BLAIR ; R. B. CLARK ; J. L. CHAWORTH MUSTERS ; Miss T. CLAY ; Flt.-Lieut. E. COHEN ; R. DA CUNHA ; H. H. DAVIS ; Miss J. M. FERRIER ; Capt. W. J. FIELD ; Sir H. S. GLADSTONE ; Miss C. E. GODMAN ; Miss V. GOODWIN ; R. GREEN ; G. H. HEATON ; W. E. HIGHAM ; A. F. C. HILLSTEAD ; E. O. HÖHN ; E. HOSKING ; Dr. J. S. HUXLEY ; N. H. JOY ; Major-Gen. Sir J. N. KENNEDY ; Mrs. F. E. LEMON ; Miss A. LIGHTFOOT ; F. A. LOWE ; W. P. LOWE ; Capt. C. A. NORRIS ; Major W. H. PAYN ; Mrs. O. PEALL ; Lieut.-Col. J. K. STANFORD ; C. J. STEVENS ; I. M. THOMSON ; Dr. W. H. THORPE ; N. TRACEY ; G. WATERSTON ; P. L. WAYRE ; Lieut.-Col. W. WORDIE ; Capt. G. K. YEATES.

Members of the Club present :—Miss C. M. ACLAND ; Dr. D. A. BANNERMAN ; Miss P. BARCLAY-SMITH ; F. J. F. BARRINGTON ; A. G. BROWN; G. BROWN ; Hon. G. L. CHARTERIS ; M. R. CHISLETT ; C. T. DALGETY ; R. P. DONALDSON ; A. B. DUNCAN ; A. EZRA ; J. FISHER ; R. S. R. FITTER ; Miss E. M. GODMAN ; Capt. C. H. B. GRANT ; J. G. HARRISON ; Dr. J. M. HARRISON (*Vice-Chairman*) ; R. E. HEATH ; R. C. HOMES ; Major-Gen. H. P. W. HUTSON ; N. B. KINNEAR ; D. LACK ; Miss E. P. LEACH (*Hon. Treasurer*) ; Miss C. E. LONGFIELD ; Dr. G. C. LOW ; P. R. LOWE ; J. D. MACDONALD ; C. W. MACKWORTH-PRAED (*Vice-*

Chairman) ; Sir P. Manson-Bahr ; G. M. Mathews ; Col. R. Meinertzhagen ; D. A. T. Morgan ; E. M. Nicholson ; E. R. Parrinder ; C. W. G. Paulson ; A. S. Phillips ; Miss G. M. Rhodes ; B. B. Roberts ; H. N. Southern ; Col. R. Sparrow ; Lieut.-Col. W. P. C. Tenison (*Editor and Hon. Sec.*) ; Dr. A. L. Thomson ; B. W. Tucker ; Mrs. H. Boyd Watt ; C. de Worms.

Guests :—M. L. Aylmer ; Miss B. Bannerman ; E. St. J. Blunt ; Mrs. Charteris ; Mrs. Chislett ; Mrs. J. Cohen ; Mrs. Davis ; Dr. C. M. Day ; Capt. Ferrier ; Mrs. Fitter ; Miss L. Grant ; Miss A. Gubbay ; Dr. Hofmeyr ; R. E. Holden ; Mrs. Hosking ; Dr. G. F. Jolly ; Dr. H. Kellaway ; Miss E. Kinnear ; Miss A. S. Lemon ; Mrs. Lowe ; A. C. Matthews ; Mrs. Norris ; Lord William Percy ; Lady W. Percy ; Mrs. Phillips ; E. W. Royston ; W. J. L. Sladen ; Mrs. Sparrow ; R. O. Steel ; Mrs. Steel ; Mrs. Tenison ; Mrs. Thomson ; Mrs. A. L. Thomson ; Mrs. Thorpe ; Mrs. Tucker ; Miss Waldron.

Members of the Union, 40 ; Members of the Club, 46 ; Guests, 36. Total, 122.

At the meeting which followed, Capt. G. K. Yeates showed a series of admirable photographs of birds he had taken during the war. These were very much appreciated. Mr. David Lack showed a short colour film of the threat display of the Robin. Mr. B. W. Tucker also showed a film of Gannets diving and feeding, including many close-up pictures, and another of Gulls feeding, including several Glaucous Gulls. These unusual films were taken by Mr. Kay inside the harbour at Lerwick, Shetland Islands. The thanks of the large audience were expressed in loud applause after each of these exhibits.

Goldeneye-Smew Hybrid.

Monsieur N. Mayaud sent the following note :—

In recording the capture of a Goldeneye-Smew hybrid in Kent on February 14, 1940 (Ibis, 1943, pp. 253–257), Dr. James M. Harrison quoted Millais' ' British Diving Ducks ', with the references given in this work. But a most important article of Rudolf Blasius seems to have escaped his notice, and the discussion between Dr. Harrison and Mr. Dillon Ripley (Ibis, 1944, pp. 224–225) looks to me unsatisfactory.

Firstly, Blasius (1887) enumerated all the records of Goldeneye-Smew hybrids known to him then : they were three old males (Brunswick, Kalmarsund, Pöl) and a young one (Isefjord, Seeland). Blasius could see and examine the three old ones, and a figure of the Danish specimen.

But he knew nothing about the female recorded by Brehm, and had no information as to where it was preserved. Blasius re-edited the colour-plate of the specimen from Pöl and gave another colour-plate of the one at the Brunswick Museum. This last one looks very similar to the hybrid of Dr. Harrison's collection ; on the other hand, the Pöl specimen has a white streak on the side of face in front of the eye and a longer bill. I think those differences may be due to another form of crossing, for example ♂ Goldeneye with ♀ Smew, as opposed to ♂ Smew with ♀ Goldeneye. We do not know anything about this last question.

Blasius was much struck by the appearance of the sternum of the Upsala specimen. It looked exactly similar to that of a common Pochard, *Aythya ferina*, and did not agree at all with those of Smew or Goldeneye. In particular the deep notches at the posterior end are well opened instead of being closed, as are the fenestræ of the Smew or Goldeneye. Blasius thought a mistake might have been made in the preparation-room. It might be so, but the sternum of the English specimen has the same opened notches, certainly not so wide as in the Upsala specimen ; the posterior end of its keel is of the type Goldeneye-Smew, that of the Upsala bird of the Pochard type. Nevertheless the skeleton (sternum, coracoids, furcula) of the hybrid looks more slender than that of the parents.

Now I do not understand why hormonal control in the English hybrid must be necessary to produce male plumage. Caridroit (and Carazza also) has described the effects of castration on Mallard : nuptial male plumage is assumed and the eclipse one disappears, the small contour-feathers are continually moulting and remiges moult twice a year. So the plumage produced by castration is the neutral one, which coincides in that species with the specific one. Why should we not think of a similar case for an abnormal hybrid which has no active gonads ? It is most probable that the drake plumage assumed by that hybrid was not due to hormonal influence of sexual nature ; the drake plumage (nuptial dress) of the Mallard being not a secondary sexual character and being only dependent on the somatic maturity.

We have to remember that of the four other males of Goldeneye-Smew hybrid three were old and one a young bird about to assume the adult plumage. But we have no proof at all of the verification of the sexes. Those birds, one excepted, were all killed and skinned by amateurs, and sexes would have to be determined on the plumage alone and not by the state of the gonads. Therefore we do not know whether the quoted " males " had functional testicles or were potentially fertile, or if they were in the abnormal and infertile condition which might be expected from their origin.

LITERATURE CITED.

BLASIUS (RUDOLF).—*Mergus anatarius* Eimbeck, ein Bastard zurischen *Mergus albellus* Linné und *Glaucion clangula* Linné. Monographische Studie. *Monatschrift des Deutschen Vereins zum Schutze der Vogelwelt*, xii. Jahrg. 1887, no. 14, pp. 1–30, 4 figs., 2 col. pls.

CARIDROIT (FERNAUD).—Recherches expérimentales sur les rapports entre testicules plumage d'éclipse et mues chez le Canard sauvage. *Trav. Station Zool. Wimereux*, xiii. 1938, pp. 47–67, photos.

Notice.

The next meeting will be held at the Rembrandt Hotel, South Kensington, on Wednesday, April 17, 1946. Dinner at 6.30 P.M., following which Mr. Kenneth Williamson will read a paper on the general ornithology of the Faeroe Islands, illustrated by lantern slides.

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

28 JUN 1946
PURCHASED

No. CCCCLXV.

The four-hundred-and-fifty-eighth meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, April 17, 1946, following a dinner at 6.30 P.M.

Chairman : Mr. C. W. MACKWORTH-PRAED.

Members present :—Miss C. M. ACLAND ; Dr. D. A. BANNERMAN ; Miss P. BARCLAY-SMITH ; F. J. F. BARRINGTON ; Hon. G. L. CHARTERIS ; R. P. DONALDSON ; J. FISHER ; R. S. R. FITTER ; J. G. HARRISON ; Dr. J. M. HARRISON (*Vice-Chairman*) ; E. O. HÖHN ; P. A. D. HOLLOM ; R. C. HOMES ; Maj.-Gen. H. P. W. HUTSON ; N. B. KINNEAR ; D. LACK ; Miss E. P. LEACH (*Hon. Treasurer*) ; Miss C. LONGFIELD ; Dr. G. CARMICHAEL LOW ; J. D. MACDONALD ; Sir PHILIP MANSON-BAHR ; G. M. MATHEWS ; D. A. T. MORGAN ; E. M. NICHOLSON ; E. R. PARRINDER ; C. W. G. PAULSON ; Lt.-Col. W. A. PAYN ; Miss G. M. RHODES ; B. B. ROBERTS ; H. N. SOUTHERN ; Lt.-Col. W. P. C. TENISON (*Editor and Hon. Sec.*) ; Dr. A. LANDSBOROUGH THOMSON ; C. DE WORMS.

Guests :—H. FENTON ; Mrs. FITTER ; Miss A. GUBBAY ; R. W. HALE ; Col. A. E. HAMERTON ; E. HOSKING ; Dr. W. SERLE ; R. WAGSTAFFE ; K. WILLIAMSON.

Members, 34 ; Guests, 9. Total, 43.

Report on Heligoland

The CHAIRMAN, Mr. C. W. MACKWORTH-PRAED, made some remarks on his recent trip to Heligoland, in company with Colonel Meinertzhagen, to explore the possibility of restarting a bird observation centre.

The whole island is a mass of craters and rubble with a certain number of buildings still standing, but badly damaged, and the cellars open to the sky. They are in fact 700 acres of most wonderful cover for birds.

Nothing in the nature of detailed observation could be made for many years, though no doubt more birds than ever will visit the island. The craters are touching in most places, and are already in one season waist high with weeds, and as you climb down into one the birds slip over the rim into the next one. Nothing practicable could therefore be done without shooting. In addition there are many unexploded bombs, and any attempt to bulldoze the rubble would be somewhat hazardous. A number of birds were seen, mostly Blackbirds, Hedge-sparrows and other small birds, with one Woodcock. There are a sufficient number of undamaged rooms, particularly in the barracks, and in the Biological Station, to provide ample shelter and working room, and the water tanks are still half full of water, though it would need filtering by now. There is no water supply on the island except these tanks, which are normally refilled by a boat from the mainland. The old bird-ringing trap and the strip of bush surrounding it are still visible but cut in half by bombs. The island is entirely uninhabited ; the population were evacuated by the Germans after the big raid on April 15, 1945.

A more detailed report will be made by Colonel Meinertzhagen on his return, and it is hoped to show some photographs at a future meeting.

A new Longtail from Southern Rhodesia.

Mr. C. W. Benson sent for exhibition the following new species :—

Prinia robertsi, sp. nov.

Description.—Crown, forehead, sides of head to below eye, brownish slate, merging into dull olive-brown on the mantle, wing-coverts, back, rump and upper tail-coverts, remiges sepia, rectrices brown, chin and throat pale grey, obscurely mottled with white, chest greyish rufous, abdomen white, flanks, under tail-coverts and thighs rufous, bill black, feet pale brown, soles white, tail of eight feathers, strongly graduated (outermost pair about 25 mm. shorter than the central pair). Sexes alike.

Distribution.—Only so far known from Vumba, near Umtali, Southern Rhodesia, at an altitude of about 5500 ft. above sea-level.

Type.—In the British Museum. Adult male, gonads enlarged. Vumba, near Umtali, Southern Rhodesia, February 2, 1946. Collected by C. W. Benson. Brit. Mus. reg. no. 1946–5–5. Collector's no. N 3970.

Measurements.—Type, wing 50, tail 57, culmen from base 15·5 mm. Female, wing 50, tail 60, culmen from base 15·5 mm.

Remarks.—Altogether a series of four males and two females was collected. This new species inhabits secondary evergreen bush growth on the edge of, and in clearings in, evergreen forest.

Two nests were discovered. One taken on January 26 contained a full clutch of three eggs, and another taken on January 29, two fresh eggs. The nest is dome-shaped, with a large side-entrance, and both seen were placed about 3 ft. above the ground. Approximate dimensions in mm :— height 160, width 70, height of entrance 80, width of entrance 45. It is flimsily suspended to leaves at the sides by cobweb, and is made of the stripped inflorescences of very fine grass. There is no different lining material. The egg is very striking in colour. Ground bright turquoise, boldly marked with large round spots of chocolate and underlying greyish lilac. An average measurement is $17\frac{1}{2} \times 13$ mm.

The nest and eggs of *Apalis chirindensis* Shelley are described by Sheppard, *apud* Priest, ' The Birds of Southern Rhodesia ', iii. p. 230. But I strongly suspect that this nest was really that of *Prinia robertsi*, to which Sheppard's description is well applicable. The nest of *A. chirindensis* is probably very similar to that of *A. melanocephala* (Fisch. & Reichw.).

The only call-note heard was a harsh, rather shrill chatter, " cha, cha, cha, cha, cha, cha " ; " a " as in " bad ".

This new species is named in honour of Dr. Austin Roberts, who has done so much for ornithology in southern Africa.

The Faeroe Islands.

Mr. Kenneth Williamson read a paper on the general ornithology of the Faeroe Islands illustrated by lantern slides.

Miss C. M. Acland also showed some photographs taken by herself in the same locality a few years ago, with special emphasis on the methods of fowling by the islanders.

Several members took part in the discussion which followed, and a very hearty vote of thanks was accorded to Miss Acland, and to Mr. Williamson for his most interesting paper, an abstract of which will be published in a subsequent ' Bulletin '.

Goldeneye-Smew Hybrid.

Dr. James M. Harrison sent the following note :—

I am grateful to Monsieur Noël Mayaud (*antea*, lxvi. pp. 48–50) for bringing to my notice the findings of Rudolf Blasius (1887) on the earlier examples of this hybrid, but his views on the physiology involved appear to lack a due appreciation of certain aspects of endocrine influence in cases of this nature, in the light of modern research. In the main his comments are answered in my letter in ' The Ibis ' (April 1944, pp. 228–30).

M. Mayaud quotes castration effects on Mallard and refers to the " neutral " plumage in this species, a condition which to my mind should suggest an absence of any hormonal influence or an exactly balanced œstrogen-androgen effect, in addition to sterility. He naïvely waives the explanation offered in my communication referred to above as unsatisfactory, without, however, giving any convincing alternative.

Broster and Vines (1938) have shown that the condition of adrenal virilism in the human subject is associated with the presence of fuchiseinophile cells in the adrenal cortex, cells which are normally present in the fœtal adrenal cortex, and which in these cases represent an adenomatous hyperplasia. Both the critics of the inference I drew in my original paper appear to be unaware of the physiological function of the adrenal cortex and its potentialities as an androgensing factor in cases of endocrine imballance or where the primary sex glands have been removed.

It would appear that both my critics favour the idea of a single hormonal control, *i. e.*, gonadal, in the determination of male secondary sexual characters, and it would seem that M. Mayaud subscribes to the view that male plumage, at any rate in Mallards, is, in fact, determined by somatic maturity, and he appears to have studiously ignored the important aspect of the delicate interrelationship of the endorine system.

Finally, as pointed out in my reply to Mr. Dillon Ripley, there were active cells in the rudimentary sex glands in my specimen, these cells were not atrophic, and where there are active cells, there is presumably hormone secretion.

The Taxonomy of the Robin Erithacus rubecula (Linn).

Mr. David Lack sent the following paper in amplification of his remarks and exhibits at the meeting on January 16, 1946 :—

The Genus.

The Robin or Redbreast, originally named *Motacilla rubecula* by Linnæus, was later separated off in a genus of its own, usually *Erithacus*, created by Cuvier in 1801, but originally spelt *Erythacus*. Other generic names, such as *Dandalus* and *Rubecula*, have been used at times. The genus *Erithacus* at one time included four species, the European *rubecula* (Linn.), the Persian *hyrcanus* Blanford, the Canary Island *superbus* Kœnig, and the Japanese *akahige* (Temminck). However, Hartert (1910) merged *hyrcanus* and *superbus* as subspecies of *rubecula*, and moved *akahige* to the genus *Luscinia*. With the former decision all modern workers agree, but the latter requires further discussion.

The male Japanese Robin *L. akahige* has a colour pattern more like that of *rubecula* than any other species, with a brown back, red breast and white abdomen. Its chief distinctions are the longer beak, the extension of rufous on to the upper parts, particularly the tail, and the band of grey below the red breast. In regard to the two former differences, the Persian Robin, *E. rubecula hyrcanus*, is somewhat intermediate (see later), though decidedly closer to typical *rubecula* than to *akahige*. This might suggest that Hartert was wrong in taking *akahige* out of the genus *Erithacus*. However, *akahige* is sexually dimorphic (like the *Cyanosylvia* subsection of the genus *Luscinia*), and the plumage of the female is closely similar to that of various other species of *Luscinia*. Further, the recently recorded habits of *akahige* are quite distinct from those of *rubecula*. Jahn (1942) describes the song as a short, beautiful trill, with long pauses between. The singing shakes the whole body, and the bird has a "song-ecstasy" with erect tail, hanging wings, and upward-pointing beak. The song and song-attitudes are quite different from those of *rubecula*. Further, the "ticking" call typical of *rubecula* is not found, and the alarm note resembles that of a Nightingale (*Luscinia megarhynchos*). These ethological characters are more convincing than plumage in denoting the systematic position of *akahige*.

As a result of Hartert's treatment, with which thus far I agree, the genus *Erithacus* becomes monotypic. To justify the retention of a monotypic genus, the species concerned must be highly distinctive.

But this is not the case in *Erithacus rubecula*, and the differences used by Hartert (1910) and Witherby (1938) to separate it from *Luscinia* are extremely slight. Further, the genus *Luscinia* includes two subsections, the Nightingales (*Luscinia* sens. strict.) and the Bluethroats (formerly separated as *Cyanosylvia*). When plumage and habits are considered, the Bluethroats seem closer to the Robin than they are to the Nightingales. If this is correct, only two alternatives are open, either to re-erect *Cyanosylvia*, or to sink *Luscinia* (created by Forster in 1817) into *Erithacus*. The latter procedure was in fact adopted by Seebohm (1881) in the British Museum Catalogue, and seems to me the better of the two. However, I am not proposing to revise the genus *Luscina*, so leave this point to a subsequent worker. It may be added that, should *Luscinia* (including *Cyanosylvia*) be merged with *Erithacus*, there is probably a case, too, for merging other closely related genera. These would include the Rubythroat *Calliope calliope* (Pallas), Swinhoe's Robin *Larvivora sibilans* Swinhoe, and the Blue Robin *Larvivora cyane* (Pallas), all of which were already placed in *Luscinia* by Hartert (1910) (see Jahn, 1942, for habits), and perhaps the White-throated Robin *Irania gutturalis* (Guérin) and others. There would seem to have been a plethora of monotypic genera, and genera with very few species, related to *Erithacus* and *Luscinia*. Before reaching a final decision on this matter, the systematist would be advised to study the habits of the birds in question in their Asiatic homeland.

Eastern Subspecies of E. rubecula.

The Persian form *E. rubecula hyrcanus* Blanford is readily distinguishable from typical *rubecula*, being rather browner above, a much deeper red on the breast, rufous on the long upper tail-coverts, and longer in beak. Measured from nostril to tip of culmen, the beak of *hyrcanus* is about 1 mm. longer than that of typical *rubecula*.

The region north-west of the breeding range of *hyrcanus* is inhabited by *E. r. caucasicus* Buturlin. This is intermediate in every respect between *hyrcanus* and typical *rubecula*, differing from *hyrcanus* in being greyer above, less deep red below, less rufous on the upper tail-coverts, and shorter in beak. Most of the near-East specimens in the British Museum (Natural History) and in Col. Meinertzhagen's collection were taken in winter quarters, and it proved impossible to divide these into two distinct groups, one of *hyrcanus* and the other of *caucasicus*, as the two intergrade, as does *caucasicus* with *rubecula*. I therefore suggest that the facts are more truly represented by suppressing the name

caucasicus, and that the breeding population of the southern Caucasus should be written as *rubecula*≷*hyrcanus*. The boundaries of the region occupied by this transitional population are not yet known.

I have not seen two races named from the Soviet Union, namely *tartaricus* Grote and *ciscaucasicus* Buturlin. Grote (1928) describes *tartaricus* as lighter above and paler below than typical *rubecula* from Sweden. Its breeding range is the Ural region. The race *ciscaucasicus* is described as browner above than typical *rubecula*, but somewhat greyer and more olive than *caucasicus* (Grote, 1929). This indicates that it is part of the transitional *rubecula*<*hyrcanus* population, and its breeding range on the northern side of the Caucasus supports this view.

I have not seen the form *xanthothorax* Salvadori and Festa, named from six specimens from Rhodes in February and March (see Hartert, 1922, p. 2169). It seems unlikely that these individuals were breeding on Rhodes, and the reddish tint on the upper tail-coverts strongly suggests that they were birds from the region inhabited in summer by *rubecula*≷*hyrcanus*.

The Atlantic Islands Subspecies.

Passing from the eastern to the south-western end of the range of the Robin, the Canary Island form *E. r. superbus* Kœnig is strikingly distinct, differing from typical *rubecula* particularly in its rich red breast and very white abdomen, while its upper parts are more olive-brown. It is also smaller, the wing averaging 3 to 4 mm. shorter than in typical *rubecula*. The beak is proportionately, and actually, slightly longer than in *rubecula*. These size trends accord with Bergmann's and Allen's rules respectively. *E. r. superbus* is confined to the central Canary Islands of Gran Canaria and Tenerife.

The western Canary Islands, the Azores and Madeira are inhabited by grey-backed, pale-breasted Robins indistinguishable in plumage from typical *rubecula* from Sweden. The wing-length of the insular birds is on the average a little smaller, but the overlap is too great for subspecific separation. Formerly they were named *microrhynchus* (Reichenow), but the implied shorter beak is not a valid character. Hence these birds should be termed *rubecula*, though isolated from typical Continental *rubecula* not only by the sea, but by populations of different colour in Portugal and Britain.

It seems astonishing that the Azores, Madeira and the western Canary Islands should be inhabited by one form when the central Canary Islands, only 20 miles from the western group, are inhabited by a strikingly

different form, *superbus*. The situation is even more remarkable if the birds from the western Canary Islands are of the same form as those breeding in Scandinavia, over 2,000 miles away.

British Subspecies.

The British Robin, *E. rubecula melophilus* Hartert, differs from typical *rubecula* in being more olive-brown, less grey, on the upper parts, and a deeper and more orange-red on the breast. Measurements are similar. Typical *rubecula* from northern, central and eastern Europe are readily separated by colour from typical *melophilus* from central England and further west. However, J. M. Harrison (1942) has shown that in eastern England, in Kent, some individuals have a breast which is almost or quite as pale as in typical *rubecula*, though the back is normally more olive. Dr. Harrison kindly lent me his large Kentish series, and I fully support his findings. Every gradation in breast-colour is found between pale *rubecula*-like and dark *melophilus*-like specimens. Dr. Harrison considers that some of these birds were probably wintering Continental *rubecula*, but others were obtained so late in April that breeding birds would seem to be involved. Further, some Suffolk Robins agree in appearance with the Kentish birds. In western Holland, too, the breeding Robins are decidedly more olive on the upper parts, and have a tendency to be more orange below, than typical *rubecula* from Germany and eastern Holland, as shown by the large series in the Leiden Museum. Kleinschmidt's race *monnardi* (see Hartert, 1922) was based on birds intermediate in appearance between *rubecula* and *melophilus*. Likewise Lebeurier and Rapine (1936) separated the birds of Basse-Bretagne as *armoricanus*, but in all respects these individuals seem intermediate between *rubecula* and *melophilus*. Again, five specimens taken by P. A. Clancey near Dornoch in Sutherland are slightly paler on the breast, and extremely slightly greyer on the upper parts, particularly the head, than typical *melophilus*.

To conclude, the boundary between typical *rubecula* and *melophilus* is not a sharp one formed by the sea, and there is a transitional population, which may be written as *rubecula*≷*melophilus*, breeding in the coastal regions on either side of the North Sea and English Channel. Moving from east to west through this transitional population, from Continental *rubecula* to British *melophilus*, one finds that the birds tend to assume the olive colour on the back before the breast becomes a deeper orange.

It should not, of course, be supposed that, at any one place in the transitional area, every individual is uniform in colour. At each place

there are some comparatively pale and other comparatively dark breasted individuals, some comparatively grey-backed and other comparatively olive-backed specimens. Indeed, this appears to hold in all parts of the Robin's range. It is the average which gradually shifts.

North African Subspecies.

The Algerian Robin was separated by Hartert (1910) as *witherbyi*. Further east, Bannerman named *lavaudeni* from Tunisia, but Hartert (1928) considered this form inseparable from *witherbyi*. The type-locality of *witherbyi* is in Lat. 36° 26′ N. and Long. 2° 28′ E. The taxonomic position would have been easier if the type-locality had been further east, as the Tunisian birds represent the culmination of a trend of variation away from typical *rubecula*, which starts in central Spain and continues through southern Spain, the North African coast opposite Spain, and then eastwards through Algeria to Tunisia. The available specimens in the British Museum and the collection of Col. Meinertzhagen suggest that, east of the type-locality, *witherbyi* and *lavaudeni* are inseparable, and Hartert's decision to merge *lavaudeni* with *witherbyi* is therefore accepted. Further west, a transitional population is involved, and it is possible that a small proportion of transitional specimens also occur east of the type-locality.

In Tunisia, the form *witherbyi* is indistinguishable from *melophilus* in plumage, though the two populations are a thousand miles apart and there is a population of different colour in between. This situation recalls that of the two separated *rubecula*-like populations already mentioned. However, in the present case, the wing-length of *witherbyi* is smaller than that of *melophilus*, and the difference seems sufficient to justify subspecific separation. The culmen of *witherbyi* is not smaller than that of *melophilus*, and may even be very slightly larger.

As already remarked, typical *rubecula* breeds in northern, eastern and central Europe. The breeding Robins in Portugal and central Spain have a rather darker and more orange breast than typical *rubecula*, but the back is as grey as in the latter form. In southern Spain and in North Africa opposite Spain, the breast is rather deeper in colour, and this trend of variation (cline) is continued eastward into Algeria until typical *witherbyi* colour is attained. At a later stage in this cline, the back starts to become more olive. Birds from Portugal were at one time referred to *melophilus* and birds from southern Spain to *witherbyi*, but both are distinguishable from *melophilus* or Tunisian *witherbyi* by their grey

backs. From central Spain to eastern Algeria, the Robin population is best designated as *rubecula*≷*witherbyi*.

It is interesting that, although *melophilus* and *witherbyi* are alike in plumage, the populations transitional with *rubecula* are distinguishable. This is because in the cline from *rubecula* to *melophilus* the back-colour changes before the breast-colour, and in the cline from *rubecula* to *witherbyi* the breast-colour changes before the back-colour. Hence *rubecula*≷*melophilus* tend to be comparatively olive-backed and pale-breasted, while *rubecula*≷*witherbyi* tend to be comparatively grey-backed and dark orange-breasted.

Most authorities (*e. g.*, Ramsay, 1923) describe *witherbyi* as having a breast of the same colour as *melophilus*, but upper parts closer in colour to those of *rubecula*. This, of course, really applies to the transitional population, and is due to the fact, already mentioned, that the type-locality of *witherbyi* is not at the far end of the cline, where the upper parts are similar in colour to those of *melophilus*. Under these circumstances some workers might prefer to retain *lavaudeni* Bannerman for the Tunisian birds, and to designate the Algerian birds as *rubecula*≷*lavaudeni*. This procedure is less confusing than that adopted here, but as *witherbyi* was named before *lavaudeni*, the former must have priority if specimens from the type-locality of *witherbyi* cannot be adequately separated from those of *lavaudeni*, as seems the case.

Inland in Morocco, the breeding form of the Robin does not apparently form part of the *rubecula*≷*witherbyi* cline, but shows a reversion to a comparatively grey-backed, pale-breasted form indistinguishable from typical *rubecula*, and hence representing another "island" of the latter form. E. Mayr writes that the large series of Moroccan birds in the American Museum of Natural History is indistinguishable from typical *rubecula*. Some specimens in the British Museum (Natural History) collected by Chaworth-Musters (1939) in February near the western end of the High Atlas are, if anything, even greyer on the back and paler on the breast than typical *rubecula*; from the date, these specimens could conceivably have been European migrants but this seems unlikely (migrants are said to keep to the coast), and Robins were later found breeding in the locality in question. Lynes (1924), who named the form *atlas* from the Middle Atlas Mountains, considered this form close to *witherbyi*. However, he was evidently comparing it with transitional *rubecula*≷*witherbyi* (see previous paragraph). Possibly he collected in an area where "Moroccan-*rubecula*" intergrades with the main Spanish-Tunisian *rubecula-witherbyi* cline.

I have not seen specimens of *E. r. sardus* Kleinschmidt, which breeds in Corsica and Sardinia. According to Hartert (1910), this form differs from typical *rubecula* in being more olive-brown above and almost as orange-red below as *melophilus*. If this is correct, then this population may be another one transitional between typical Continental *rubecula* and Tunisian *witherbyi*, which would accord with the geographical position of Sardinia and Corsica.

Migration.

Robins breeding in northern Europe winter in southern Europe and North Africa. Wintering *rubecula* from the Continent have also been reported in the Atlantic islands, and in Corsica. Likewise some British Robins migrate to the Pyrenees. Again, Continental *rubecula* arrive on the east coast of Britain in autumn, and though most of these individuals pass on, some possibly stop the winter ; this at least is the opinion of Dr. J. M. Harrison, though it is difficult to be certain, as breeding specimens from the extreme east of England are sometimes rather pale on the breast, like *rubecula*. As yet, no Robin ringed on the Continent has been found in Britain, and none ringed in Britain in winter has been found on the Continent.

The existence of migration makes it difficult to be sure that any particular collected specimen belongs to the local breeding form, except for those taken when actually breeding, at which season the plumage is worn, so that colours are less clear than at other seasons, and the primaries are often too frayed for reliable measurement. Owing to these doubts, I have not given average wing-measurements in this paper, as they might be misleading, but I have indicated where I think that there is a difference in size.

So far as known, the *rubecula*-like Robins breeding on Madeira, the Azores, and the western Canary Islands do not migrate, and it is most unlikely that they would do so. On the other hand, typical *rubecula* from most of Finno-Scandia are wholly migratory. There, is therefore, an ethological difference between these two *rubecula* populations. In Finland, the Robin is wholly migratory, though an occasional bird stays as late as December, only to die during the winter (Palmgren, private communication). In Norway, the Robin is wholly migratory except for a few wintering in the comparatively warm south-western coastal region (Collett, 1921). In East Prussia, a very few Robins winter regularly, though dying if the weather is unusually severe (Tischler, 1940). From East Prussia southward and westward, an increasing proportion

of Robins are non-migratory. Hence the zone of intergradation between wholly migratory and wholly non-migratory Robin populations is extensive, and greater than that occupied by the extremes.

The Subspecies Concept.

The taxonomic genus is a convenient unit for cataloguing related species. The taxonomic species has real validity and also great practical convenience. But the taxonomic subspecies or geographical race presents serious difficulties, both logical and practical. Formerly this concept was of great value, as it drew attention to the existence of geographical variation within the species. Further, it worked well when birds had been collected only from discrete regions each of which was well separated from the next, and it still works well for many insular or otherwise isolated forms, such as *superbus* in the case of the Robin. But when, as now for the Robin, the subspecies concept is applied to extensive collections made over a large land area, the practical difficulties become considerable, many judgements are inevitably arbitrary, and the use of subspecific names, so far from helping, actually becomes misleading as a description of the type of variation.

First, the use of separate names implies a degree of separation between populations which often does not exist. The " British " Robin is not, in fact, completely " British " in the east of England, and is perhaps most " British " of all in Ireland, while Continental Robins from Holland have " British leanings ". In general, subspecies usually intergrade with each other, and this may be represented, as in the present paper, by writing the two subspecific names with a linking sign. But the transitional population thus designated is not a uniform one, and this terminology does not reveal that one character may change in a different way from another, *e. g.*, in the region between typical *rubecula* and typical *melophilus* the back becomes more olive before the breast becomes more orange. Further, the transitional zone may be extensive, perhaps more extensive than that occupied by one of the end forms, and the use of the terminology of subspecific transition then becomes clumsy. Under these conditions, some workers may prefer to give the transitional population a different name, *e. g.*, *caucasicus* instead of *rubecula*$\gtrless$*hyrcanus*, but this at once conceals the intermediate nature of the form in question.

Another difficulty concerns the type-locality for subspecies. The type-locality of *melophilus* is in Hertfordshire, which is perhaps just far enough west to avoid the pale-breasted variants sometimes found

in eastern England, though it must be near the border. It would have been easier if the type-locality had been further west, but the type-locality was determined not by considerations of variation in the Robin, but by the accident of where the Rothschild family happened to settle. In the case of the Algerian Robin *witherbyi*, the accidentally determined type-locality has led to serious difficulty, as it would have been preferable to have had a name for the Tunisian breeding form, which represents the end of a cline. This accidental fixing of type-localities for subspecies will constitute an increasingly difficult problem as trends of variation become better known. Yet the provision of type localities is essential.

The use of subspecific names not only implies discontinuity where none may exist, but also unity where there may, in fact, be discontinuity. Thus the breeding Robins of the Azores (and Madeira) bear the same subspecific name, *rubecula*, as those of Scandinavia, though the two populations are isolated from each other by a population of different appearance. In the parallel case of the Tunisian and British Robins, the two populations receive separate names because, though alike in plumage, they happen to be separable in measurements. Now there is also a difference in measurements in the case of the Azorean and Scandinavian populations, but in this case it happens not to be enough for subspecific separation. Yet, though not sufficiently separable by their appearance, the Azorean and Scandinavian Robin populations are discrete units, and the situation is obscured by giving them the same name. There is a third "island" of *rubecula*-like birds in the Atlas Mountains. Again, the provision of separate subspecific names for the Tunisian and British Robins, which on some grounds is desirable, hides the fact that these two populations have similar plumage.

The arguments brought forward by Huxley (1938) as to the inadequacy of subspecific terminology apply, with added force, to the case of the Robin. Huxley's concept of clines, which is intended to supplement subspecific description, represents a marked advance. However, difficulties of the type raised for the Robin will, I believe, be found to apply to many other species when intensive collecting has been carried out in all parts of the range. One therefore begins to wonder whether subspecific trinomial terminology is not beginning to outlive its usefulness and validity. Certainly, in the case of *Erithacus rubecula*, it is both simpler and more accurate to describe subspecific variations in terms of geographical trends, and to omit altogether the tyranny of subspecific names.

Summary.

1. The Robin or Redbreast, *Erithacus rubecula* (Linn.), is so close to the Bluethroats and Nightingales that there is probably a case for sinking the genus *Luscinia* into *Erithacus*. *E. rubecula* is not particularly close to the Japanese Robin *L. akahige*.

2. *Erithacus rubecula* is here divided into five subspecies, *superbus* Koenig on Gran Canaria and Tenerife, *hyrcanus* Blanford in Persia, *witherbyi* Hartert in eastern Algeria and Tunisia, *melophilus* Hartert in most of Britain, and *rubecula* (Linnæus) in northern, eastern and central Europe, also in the Azores, Madeira and Western Canary Islands, and in part of Morocco. A possible sixth race, *tartaricus* Grote from the Urals, was not examined.

3. The subspecies *rubecula* intergrades with *hyrcanus* in the Caucasus, with *witherbyi* in southern Iberia and part of North Africa, and with *melophilus* in the districts bordering the North Sea and English Channel. These transitional populations have sometimes received separate names.

4. The races *witherbyi* and *melophilus* are alike in plumage, though living 1000 miles apart, with a form of different colour in between. The transition from *rubecula* to *melophilus* occurs in a different way to that from *rubecula* to *witherbyi*.

5. The breeding birds on the Azores and other Atlantic islands cannot be differentiated subspecifically from those of Scandinavia, though separated by a population of different colour in between.

6. The situation is confused by the migration of more northerly forms into regions where more southerly forms reside.

7. The provision of subspecific names confuses, instead of assisting, the description of the subspecific variations found in *Erithacus rubecula*.

Acknowledgements.

I am much indebted to the authorities at the British Museum of Natural History (J. D. Macdonald) and to the Rijks Museum v. Nat. Historie at Leiden (Dr. G. C. A. Junge), also to Dr. J. M. Harrison and Col. Meinertzhagen, for giving me every help in studying their collections. I am also indebted to Lt.-Col. Tenison and Capt. Grant for some valuable criticisms, and to Dr. E. Mayr, who provided information on specimens in the American Museum of Natural History, and who also helped greatly by criticising the manuscript in draft.

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Note.—The above works include reference to all the other important papers on the taxonomy of the Robin not cited specially.

Notice.

The next meeting will be held at the Rembrandt Hotel, South Kensington, on Wednesday, May 15, 1946. Dinner at 6.30 p.m., following which Mr. J. M. D. Mackenzie will read a paper on "Forest Ornithology".

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

PURCHASED

No. CCCCLXVI.

The four-hundred-and-fifty-ninth meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W. 7, on Wednesday, May 15, 1946, following a dinner at 6.30 P.M.

Chairman : Mr. C. W. MACKWORTH-PRAED.

Members present : Miss P. BARCLAY-SMITH ; F. J. F. BARRINGTON ; C. J. DUFFIN ; J. FISHER ; R. S. R. FITTER ; Miss C. E. GODMAN ; Miss E. M. GODMAN ; B. G. HARRISON ; J. G. HARRISON ; Dr. J. M. HARRISON (*Vice-Chairman*) ; R. E. HEATH ; N. B. KINNEAR ; Miss E. P. LEACH (*Hon. Treasurer*) ; Miss C. LONGFIELD ; Dr. G. CARMICHAEL LOW ; P. R. LOWE ; J. D. MACDONALD ; J. M. D. MACKENZIE ; Sir PHILIP MANSON-BAHR ; G. M. MATHEWS ; Col. R. MEINERTZHAGEN ; D. A. T. MORGAN ; E. R. PARRINDER ; Lt.-Col. W. A. PAYN ; Miss G. M. RHODES ; B. B. ROBERTS ; Lt.-Col. W. P. C. TENISON (*Editor and Hon. Sec.*) ; Dr. A. LANDSBOROUGH THOMSON ; B. W. TUCKER ; Mrs. W. BOYD WATT.

Guests :—Mrs. R. G. BARNES ; Dr. F. K. BOSTON ; Miss T. CLAY ; Miss J. HARRISON ; R. S. JENYNS ; Mrs. LOWE ; Mrs. TENISON.

Guests of the Club :—W. L. TAYLOR, Forestry Commissioner ; Prof. Dr. G. J. VAN OORDT, Utrecht University, Holland.

Members, 31 ; Guests, 9. Total, 40.

After being welcomed by the Chairman, Dr. VAN OORDT answered several questions regarding the conditions of the Bird Sanctuaries in Holland. Col. MEINERTZHAGEN gave an account of his recent visit to Heligoland and Berlin.

Report on Heligoland.

Col. MEINERTZHAGEN amplified the remarks made by Mr. Mackworth-Praed at a previous meeting of the Club on their visit to Heligoland.

The island is completely evacuated and in ruins, densely pock-marked with craters and overgrown with weeds and garden escapes. There is ample fresh water in capacious tanks and the telephone with the mainland is in order. Here and there more or less undamaged rooms exist, and there would be no difficulty in finding weather-proof accommodation. Fuel and food would have to be imported though ample fire-wood exists for cooking and heating. The psychological effect of living amid ruins and devastation must be taken into account. It is not everybody who could live amid such conditions without a feeling of utter depression after a week or so.

The trapping of birds is out of the question, for the whole island offers splendid cover for migrants. All observations would have to be undertaken by eye and by shooting.

It is hoped that the Union will set up a small committee to consider the possibility of continuing the work undertaken by the Germans, even if that work is not so comprehensive, so that Heligoland's record of a hundred years as a Bird Observatory may not lapse. In the meanwhile, an effort is being made to persuade the United Nations to internationalise both Heligoland and the Italian Island Pantellaria as Biological Stations under international control.

A Case of Arrested Migration.

Col. Meinertzhagen recounted his experience of a case of arrested migration in North Cornwall. At dawn on the 9th May a dense sea-fog blanketed the coast round Trevose Head, which was visited soon after 8 a.m. The headland is carpeted with short grass and dwarf sedge, the little pale blue *Scilla verna* in full flower, bright blue milk-wort, pink and white thrift and compact pin-cushions of golden gorse in full bloom ; a most delightful sight. The resident population of the headland comprises Jackdaws, Corn Buntings, Linnets and a single pair of Robins.

The migrant community, none of which had been there on the previous evening, included 14 Pied Flycatchers, all females, several Spotted Flycatchers, a single Red-breasted Flycatcher, many Wheatears (both Greenland and Common), a few Whinchats, many Willow Wren and Whitethroat, a few Cuckoos and Turtle Doves and a single cock Merlin. Swallows and Swifts were passing continually from south-west to north-east at almost ground-level.

The cock Merlin was playing havoc among the small birds and was seen to kill three. The third kill was wanton for it was left without

being eaten. I have seen Hobbies kill for fun, but this is the first occasion I have seen Merlin do so.

I was much interested in the Red-breasted Flycatcher, for I wondered what might happen if he were to meet a Robin, so very like him in plumage. But I could not persuade them to meet, the Flycatcher sticking to posts and rails and the Robin refusing to leave the gorse. But I have seen the Red-breasted Flycatcher on its breeding ground. They are inoffensive little birds apparently unconscious of territorial rights and not interfering with trespassers, though they use their red breasts to impress the female, standing rigid before her with quivering tail and pouting out their red breast. It would seem that whereas the Flycatcher uses its red breast for courtship and not threat, the Robin's red breast is mainly used for threat and advertisement against intruders.

The night of the 9th to 10th May was clear, and at dawn on the 10th not a single migrant was noticed.

Exhibition of Two Varieties of the Robin Erithacus rubecula (Linn.).

Dr. J. M. Harrison read the following note :—

In the last issue of the ' Bulletin ' Mr. David Lack has set out a valuable review on the taxonomy of this species, and has also raised some points upon the validity of the genera of the Robins (*Erithacus*), the Nightingales (*Luscinia*) and the Blue-throats (*Cyanosylvia*), a genus which has been synonymized with *Luscinia*. In the course of this communication he discusses the form *Luscinia akahige*, the Japanese Robin, stressing its close similarity in plumage to the European Robins but giving equal emphasis to the differences in behaviour and in song.

The purpose of this contribution is to show two very remarkable aberrant Robins, both obtained in Kent, which show a character in pattern distribution very similar to that of *Luscinia akahige*. It will be seen that in both these birds there is a broad dark grey, in one of the two almost black, band situated below the red gorget. The distribution of this broad dark grey band may, of course, merely be fortuitous, on the other hand it may indeed have the significance of an atavistic trend towards *Luscinia akahige*. While admitting the extremely speculative nature of any deduction in such cases, the distribution and type of patterning in both these specimens is so strikingly close to the Asiatic bird that it may have some significance, and would, of course, be a point in support of the suggestion that the genus *Luscinia* should not be separated from *Erithacus*.

Forest Ornithology.

Mr. J. M. D. Mackenzie read a paper of which the following is an abstract :—

Forest ornithology is " the detailed study of species actually or potentially common enough in commercial woods to affect them, so that their habits can be used to vary their numbers beneficially ". Anything done must yield a return, and it is not concerned with varieties.

Collinge gives us much information about food, mostly from agricultural land and fruit gardens. This can be used for woods, as birds feed on the most easily obtainable suitable food. The problem is to get birds where we want them, when we want them there, and in the most suitable numbers. Numbers of different species are wanted rather than numbers of individuals of one or two species only, to deal with pests in the most vulnerable stage. Nestlings feed almost entirely on insects, so it is important to get birds to nest in woods. In the other seasons, however, birds are also important.

The mature woodland habitat of the ornithologist is not the same as the mature wood of the forester. It is much older and contains nesting holes and unsound trees.

There are other checks on insects besides birds—parasites and carnivores. These are rather remedial against a plague, while birds are preventive.

Although the tendency today is to be less clean and tidy, there are few holes and stumps in plantations, and little undergrowth ; that is, there are few good nest sites. Nests are often made in forked trees, or trees which have lost their leaders ; such trees are removed in thinnings. Part of the answer is to supply nest-boxes and properly pruned shrubs.

Rowan, Kendigh and others have shown that small birds can be kept alive and well at low temperatures if they have shelter and ample food, especially if they get artificial light for a period at night to enable them to feed. It is inability to eat enough during the short day to keep them warm which kills them, and not just cold. Shelter, given by nest boxes, helps considerably, but winter feeding in very cold weather probably saves many small birds.

" Edge," defined as the transitional area between two vegetational zones, such as woods and fields, is nearly the same as " cover ", and Bucher found that the population density of most nesting birds varies as a direct function of the amount of edge per unit of area. Again, if two areas are taken, the one open to shooting and the other closed, up to 25 per cent. of the stock can be shot in the open area, without affecting the population

after the next breeding season. Also, cover has a certain definite holding capacity, any increase in numbers causing a steep rise in mortality.

Leibig's Law of the minimum (the limit of increase of a species is set by the least abundant necessary factor) comes in, and if edge or cover is the least abundant necessary factor, the only way to increase numbers permanently is to increase the amount of edge, *e. g.*, in making a new road. Another example of this law is where something is entirely absent. The provision of quite a small water supply in a sandy flat area has caused a quite disproportionate increase in bird life. Alexander's Heron census is another case. A hard winter decreases feeding grounds and causes a drop in numbers. That drop is recovered in a single good season, but a series of good seasons causes no increase.

Cover and nest sites are the two factors most commonly absent in commercial woods.

The above are some of the data available to work on. The forest is a continually changing entity. A plantation closes up, grows in height, has the lower branches removed, and is thinned every 4 to 10 years throughout its life, the number of stems being reduced from 2100 per acre at 15 years to 183 at 100. All stages should be found in a normal wood, or a regular series of age gradations, but the actual locus of any given stage or condition is always changing. Birds can always find a given type of habitat, but have to move about to do so. Each tree species produces a characteristic type of cover, undergrowth, and nest site.

Experiments showed that Willow-Warblers are not attracted by good ground cover (a 4-year-old plantation) with bare sticks put up as song-posts ; nor are they numerous in a very open larch plantation. But in Scots pine and larch next door, closed up and 7 to 8 feet high, numbers run to about two singing males per acre. So they want ground cover for nests, branch cover, 3 feet or more high, for refuge and trees 7 or 8 feet high as song-posts.

In plantations, certain tree species are much more popular than others as nest sites for the hedge-row and thicket birds. The order for those examined was approximately :—

1. Sitka Spruce.
2. Norway Spruce.
3. Douglas, Cypress, Thuya, *Abies grandis*, Hemlock, Juniper.
4. Pines.
5. Larch and all broad-leaved species.

This applies to plantations up to 25 years old.

Taylor describes the Forestry Commission nest-box experiment in the Forest of Dean. He shows :—

1. Pied Flycatchers increased enormously. So nest sites were the ruling factor.

2. Numbers of occupied boxes increased in each of the first three years, showing a steady increase in the bird population, or that they become accustomed to nesting in boxes.

3. Bird population is now fair, against normally poor numbers.

4. Certain boxes have had their holes enlarged by Woodpeckers. These are disliked by Tits and preferred by Redstarts, while Pied Flycatchers are intermediate. There seem to be varying grades of hole nesters, Woodpeckers and Nuthatchers being more particular about the entrance hole than Tits ; and Robins, Wagtails, Spotted Flycatchers and perhaps Redstarts prefer a shelf with a roof.

5. Pied Flycatchers nest in boxes tenanted earlier by Great Tits. This has been most frequent in 1945, suggesting that available accommodation is again getting short.

In reports of 210 boxes, 40 in one place were found to have branches too close to the holes, elsewhere, 59 per cent. were tenanted in the first year.

Dr. C. F. C. Beeson and I did some work in Burma on Woodpecker attacks on *Duomitus ceramicus*, the bee-hole borer of teak, a large moth which makes galleries about half an inch wide and 9 inches long into the wood of the tree. These galleries go 4½ inches inwards and then 4½ inches upwards normally. But when the tree is 8 inches or less in diameter, they go to the centre of the tree and then up the pith. In trees of 6 inches diameter and less, or in the earlier stages, when the gallery is short, Woodpeckers are an important controlling agent. When the gallery is under 4 inches long the insect is reached from the feeding chamber in the sapwood, only one hole being required. When the gallery is over 4 inches, and so the insect is out of reach at the far end, a second hole is made directly above the first. This hole invariably goes straight into the gallery. Woodpecker attacks in a six-year-old plantation were found on 13 per cent. of the trees, corresponding to the infestation figure for that plantation. (The above work is recorded in 'Indian Forest Records', vol. viii. pt. iii. 1921, p. 46, and 'Burma Forest Bulletin', no. 7, 1923, p. 2.)

This investigation is slow and I will be very grateful for any relevant information, either as to facts or references, addressed to me at Tullach Ard, Balbeggie, Perth.

A New Race of Flycatcher from West Africa.

Dr. W. Serle sent for exhibition the following new race :—

Dyaphorophyia ansorgei lomaensis, subsp. nov.

Description.—The adult female differs from Hartert's description (Bull. B. O. C. xv. p. 74) of the type-specimen of *Dyaphorophyia ansorgei ansorgei*, which is a female, by the dark patch on the underside being very dark chestnut-brown rather than rufous chestnut, and being restricted to the throat and the uppermost part of the breast, and sharply demarcated from the lower breast which, like the abdomen, is bright yellow lightly washed with rufous chestnut. The under tail-coverts and the chin are pale yellow unwashed with rufous. It differs from the female, *D. a. harterti* Bates, in that the upper parts are greener and less greyish, with the frontal band a darker yellow, whilst below the chin is pale yellow rather than whitish, the throat patch less extensive and darker, and the breast and belly a more vivid yellow with a darker wash, and the under tail-coverts a brighter yellow. It was also compared with the female *D. a. graueri* Hartert.

Distribution.—Loma Mountains, Sierra Leone.

Type.—In the British Museum. An adult female from Bintimani Peak, 9° 15′ N., 11° 10′ W., Loma Mountains, Sierra Leone, altitude 3000 ft. : date 15 April, 1943 : (Brit. Mus.), Reg. no. 1946.27.1.

Measurements.—Wing 60 ; tail 28 ; tarsus 16 ; culmen 12 mm.

Soft parts.—Iris grey-brown ; tarsus grey ; bill black ; wattle apple green.

Remarks.—An adult male was obtained in the same locality and on the same date. As the male of the nominate race is not known it was compared with *D. a. harterti*, from which it differs in having the underparts a deeper golden yellow and heavily washed from the lower throat to the belly with rufous chestnut : they are two very different birds—one appears yellow below, the other chestnut. There is a very slight rufous wash on the under tail-coverts.

The soft parts are as in the female, and the measurements are :—Wing 63 ; tail 28 ; tarsus 16 ; culmen 12 mm.

The male, *D. a. lomaensis*, bears a striking resemblance to the description of *Dyaphorophyia concreta* Hartlaub. I have examined in the British Museum the coloured drawing of the latter referred to in Bannerman's ' Birds of West Africa ', vol. iv. p. 282. Both have the same light frontal band ; both have a small white horionztal line below the ear-coverts ; in both the throat, breast and belly are washed with dark rufous or reddish chestnut, with the chin and upper throat and under tail-

coverts different from the rest of the underparts. But although the pattern is similar the coloration is quite different. In *D. concreta* the frontal band and chin and throat and under tail-coverts are dirty white, washed with reddish chestnut. These parts are golden yellow in *D. a. lomaensis* with a slight chestnut wash on the under tail-coverts; and if the feathers of the breast and abdomen are parted the same golden yellow is apparent subjacent to the rufous chestnut wash.

Note on Square-tailed Drongos.

Mr. J. D. Macdonald sent the following communication :—

At different times, and working on different specimens of the same Square-tailed Drongo from the southern Sudan, C. H. B. Grant gave the identification as *Dicrurus ludwigii elgonensis* van Someren, whereas I came to the conclusion that they were *D. sharpei* Oustalet. This led to the examination of *D. sharpei* in relation to *D. ludwigii* Smith, and we found that we were both right, for *D. l. elgonensis* is identical with *D. sharpei*, and the name must therefore become a synonym. At the same time *D. sharpei* is clearly very closely related to *D. ludwigii*, and as it is contiguous in distribution it should be regarded as a race.

In the Bull. B. O. C. lxii. 1942, p. 61, Grant and Praed revised the races of *D. ludwigii*. To this revision may now be added the following amendment :—

Dicrurus ludwigii sharpei (Oust.).

Dicrurus sharpei Oustalet, N. Arch. Mus. Paris, 1879, p. 97 : Gabon.

Dicrurus elgonensis Van Someren, Bull. B. O. C. xl. 1920, p. 95 : Lerundo, near Mt. Elgon.

Generally duller than the nominate race; velvety blue-black with a violet wash. Wing 100–112 mm.

Distribution.—Senegal and Gabon to northern Angola, southern Sudan, north-eastern Belgian Congo, Uganda and Kenya Colony (except coastal districts).

Notes on Eastern African Birds.

Captain C. H. B. Grant and Mr. C. W. Mackworth-Praed sent the following eight notes :—

(1) On the Francolins of Eastern Africa placed by Sclater under *Francolinus sephæna* Smith, in Syst. Av. Æthiop. 1924, pp. 79–80.

In the Bull. B. O. C. liv, 1934, p. 170, we reviewed the races occurring

in Eastern Africa. A number of specimens have reached the British Museum since that year from various donors, and birds with the chocolate or chestnut stripes on the breast and flanks have been received from southern Abyssinia and southern Nyasaland.

Erlanger, J. f. O. 1905, pp. 152–154, found both plain and chocolate striped birds on the Juba River from El Uak to Gobwen and one with chocolate stripes from Ennia, Gallaland, commented on them and placed the latter as a species under *Francolinus kirkii* Hartlaub.

Van Someren, Nov. Zool. xxix, 1922, p. 30, records birds with no chocolate stripes on the breast and flanks from the mouth of the Tana River, and others with chocolate stripes on the breast and flanks from Lamu, Manda Island, Mkoi, Vanga and Dar-es-Salaam, and odd birds with such stripes between Tsavo and Taveta.

Friedmann, Bull. liii, U.S. Nat. Mus. 1930, p. 109, records a specimen from the Tana River near the confluence of the Thika River having reddish shaft stripes on abdomen and flanks*.

We have re-examined the series in the British Museum collection and find that there are birds with chocolate stripes on breast and flanks from British Somaliland, southern Abyssinia at Mega, Lamu, Korogwe, Morogoro, Lurio River, Lindi, southern Nyasaland, and near Beira, and birds without chocolate stripes from Malindi. These specimens, together with the published records quoted above, shows that the chocolate-striped form occurs in northern British Somaliland, central and southern Abyssinia, southern Italian Somaliland, Kenya Colony from coastal areas from Tsavo to Taveta; confluence of Thika-Tana Rivers and at Moyale; Tanganyika Territory from coastal area to Korogwe, Morogoro and the confluence of the Lumesule–Rovuma Rivers; northern and southern Portuguese East Africa and southern Nyasaland.

It has been stated by many authors that the marking below of the bird without chocolate stripes is very variable, and the many specimens we have examined confirms this; but this variation does not appear to account for those individuals which have chocolate stripes, and when a series of these are placed together and compared with a series of birds which have no chocolate stripes on breast and flanks they do look very different and give a strong impression of being another species. As there is no geographical separation, there are only two choices in this matter;

* Mr. Conover of the Chicago Nat. Hist. Mus. has kindly informed us under date 29 April, 1946 that three males from Moyale and two males and one female from Wajheir in that Museum's collection. All have some chocolate spots and stripes below.

one, that the chocolate-striped birds are only another colour variation, and two, that they represent another species. We incline to the latter view, as did Erlanger, and propose to treat them in this way, as follows :—

A. Chocolate spots or stripes below.

Francolinus rovuma rovuma Gray.

Francolinus rovuma G. R. Gray, List. Spec. Bds. Brit. Mus. pt. v. Gall. p. 52, spec. A, 1867 : Rovuma River, Portuguese East Africa–Tanganyika Territory boundary.

Size smaller. Wing : males 135–158, fifteen measured ; females, 130–145 mm., eight measured.

Distribution.—The Juba River, southern Italian Somaliland to coastal areas of Kenya Colony as far west as Wajheir and the confluence of the Thika–Tana Rivers, Tanganyika Territory as far west as Korogwe, Morogoro, and the confluence of the Lumesule–Rovuma Rivers to southern Nyasaland and Beira, Portuguese East Africa, also Manda Island.

Francolinus rovuma somaliensis Grant & Mackworth-Praed.

Francolinus sephæna somaliensis C. Grant & Mackworth-Praed, Bull. B. O. C. liv, 1934, p. 172 : Bihendula, about 20 miles south of Berbara, British Somaliland.

Size larger. Wing : males 152–165, six measured ; females, 145–152 mm., eight measured.

Distribution.—British Somaliland to southern Abyssinia and northern Kenya Colony at Moyale.

B. No chocolate spots or stripes below, but variable dusky markings and usually cream-coloured shaft stripes sometimes confined to sides of chest and flanks.

Francolinus sephæna grantii Hartlaub.

Francolinus grantii Hartlaub, P. Z. S. 1866, p. 665, pl. xxxix. fig. 1 : Unyamwesi country, northern Tabora Province, Tanganyika Territory.

Wing : males, 135–162, sixty-two measured ; females, 130–152 mm., forty-nine measured.

Distribution.—Abyssinia, southern Sudan, southern British Somaliland and Italian Somaliland to Tanganyika Territory, excepting the coastal area.

Note.—In Bull. B. O. C. lvi. 1934, p. 171, we placed three races as synonyms and we are still of the same opinion, as the variable markings below are not racial and the wing measurements are such that no geographical demarkation can be laid down as shown below :—

Northern and central Abyssinia. Males 147–160, females 145–154.

Southern Abyssinia. Males 147–157, females 135–149. British Somaliland. Males 156–162, females 151–154. Southern Abyssinia. Males 147–157, females 135–149. Southern Sudan. Male 150, females 136–151. Uganda. Males 139–149, females 134–143. Kenya Colony. Males 136–157, females 135–145. Southern Italian Somaliland. Males 136–147, females, 130–143. Tanganyika Territory. Males 135–151, females 133–140. Northern Portuguese East Africa. Male 150 mm.

(2) On the status of *Accipiter ferox* S. G. Gmelin.

In ' The Ibis ', 1934, p. 643, we discussed the question of this name having priority over *Falco gallicus* J. F. Gmelin. In the O.M. 1941, p. 58, Grote discusses its occurrence in south Russia in winter and decides that although it winters further south it does on occasions winter in southern Europe. Grote does not discuss the name of this Eagle, but the statement that it does not occur in south Russia in winter contradicts S. G. Gmelin's remarks in Nov. Comm. Acad. Petrop. **15**, 1771, p. 442, which are as follows :—

" This bird has been seen at Astrakan in the winter of 1769 and frequently round about the city ". This remark regarding the occurrence in the winter of 1769 reads as though it was especially notable, and that this Eagle did not normally occur at Astrakan at that time of year.

Mayr in ' Emu ', 1944, p. 303, states that *Accipiter ferox* has been rejected by well-known Palæarctic ornithologists ; but this is not quite correct, as both Hartert and Kirke Swann quote it in the synonymy and have not, therefore, definitely considered it as indeterminate. If a name is considered to be indeterminate it cannot be quoted in a synonymy.

We admitted in ' The Ibis ', 1934, p. 643, that all the characters given do not fit the Short-toed Eagle, but the majority of the characters and the figure are uncommonly like that bird. However, we are quite prepared to agree that in view of the discrepancies, S. G. Gmelin's *Accipiter ferox* is indeterminate, but it must definitely be considered as such and not in the future be quoted in synonymy. The name of the Short-toed Eagle remains as *Circaëtus gallicus* S. F. Gmelin.

(3) On the Status of *Stizorhina fraseri intermedia* S. Clarke, Bull. B. O. C. xxxi. 1913, p. 107 : Entebbe, southern Uganda.

This race was compared to *S. f. vulpina* Reichenow and *S. grandis* O. Grant=*Neocossyphus rufus rufus* Fischer & Reichenow, the latter of which is now placed in the Thrush family. With the further material now obtainable we are unable to see that *S. f. intermedia* differs in colour from

S. f. vulpina. The wing measurements of the ten specimens of *S. f. vulpina* in the British Museum collection are 92–102 mm., and of nine specimens of *S. f. intermedia* 98–108 mm., which shows an overlap of 4 mm.*. We do not consider that *S. f. intermedia* can be recognized, and as no geographical area can be demarkated between this race and *S. f. vulpina*, we place *Stizorhina fraseri intermedia* S. Clarke as a synonym of *Stizorhina fraseri vulpina* Reichenow.

(4) On the status of *Tchitrea poliothorax* Reichenow, J. f. O. 1916, p. 161 : Bukoba, north-western Tanganyika Territory.

Through the kindness of Dr. Stresemann of the Berlin Museum we have had the loan of the type of this species, and find that it agrees very well with the aberrant specimens of *Tchitrea restricta* Salomonsen, especially with a male from Entebbe, Uganda, Brit. Mus. Reg. no. 1906. 12.11.51, except that the type is slightly paler chestnut above and below, although mixed with grey below as in the British Museum specimens. We therefore place *Tchitrea restricta* Salomonsen as a synonym of *Tchitrea poliothorax* Reichenow.

(5) On the Status of *Turdus pelios ubendeensis* Moreau, Bull. B. O. C. lxiv. 1944, p. 65 : Nyamansi River, Ubende, western Tanganyika Territory, and the distribution of *Turdus stormsi* Hartlaub, Bull. Mus. Hist. Nat. Belg. iv. 1886, p. 143, pl. iii. : Mpala, eastern Belgian Congo.

Since Mr. Moreau described on our advice *T. p. ubendeensis*, we have been able to examine more carefully the whole series in the British Museum, and find that his specimens agree well with a specimen of *Turdus graueri* Neuamnn, Bull. B. O. C. xxi. 1908, p. 56 : Nsasa, Ruanda, eastern Belgian Congo, collected by R. Graueri in the Urundi area and named by Neumann as *Turdus graueri*. Furthermore, we find that this is a race of *Turdus olivaceus* Linnæus, and has nothing to do with *Turdus stormsi*. We therefore place *Turdus pelios ubendeensis* Moreau as a synonym of *Turdus olivaceus graueri* Neumann.

Turdus stormsi is given by Sclater, Syst. Av. Æthiop. 1930, p. 442, as occurring as far north as Kasulu, on a specimen now in the British Museum collection, Brit. Mus. Reg. no. 1924.5.7.39. This specimen is not *T. stormsi* but *T. o. graueri*, and therefore the distribution of *Turdus stormsi* is :—South-eastern and eastern Belgian Congo to north-eastern Northern Rhodesia and southern Nyasaland.

* We have also seen ten specimens from Uganda in the collection of the Royal Scottish Museum, Edinburgh, which have a wing measurement of 97–105 mm.

(6) On the Status of *Oriolus larvatus kikuyuensis* van Someren, Nov. Zool. xxix. 1922, p. 127 : Nairobi, Kenya Colony.

In the Bull. B. O. C. lxv. 1945, p. 27, we rediscussed the races of *Oriolus monacha* (Gmelin) and *Oriolus larvatus* Lichtenstein, recognizing *O. l. kikuyuensis* as being rather larger than *Oriolus larvatus rolleti* Salvadori. The British Museum series having returned to London, we have been able to measure a considerable number of specimens which give the following wing measurements in mm. :—

Abyssinia. Adult 124–147, one 115 (twenty-five) ; young 116–128 (seven). Sudan. Adult 123–133 (eight) ; young 130–132 (two). Somaliland. Adult 132 (one). Uganda. Adult 130–146, one N.E. Uganda 128 (nineteen) ; young 124–138 (four). Kenya Colony coastal. Adult 122–133 (twelve) ; young 124–128 (four). Kenya Colony inland. Adult 127–140 (fifteen) ; young 124–135 (six) ; Nairobi. Adult 128–140 (three). Tanganyika Territory coastal. Adult 125–127 (four) ; young 133 (one). Tanganyika Territory inland. Adult 131–142 (eighteen) ; young 131–141 (seven). Northern Portuguese East Africa. Adult 128–138 (ten) ; young 131–134 (three). Nyasaland. Adult 130–145 (thirty-three) ; young 128–141 (eighteen). Belgian Congo. Adult 141 (one) ; young 137 (one). Northern Rhodesia. Adult 137–141 (two) ; young 131 (one). Angola. Adult 128–130 (two) ; young 133–136 (two). Zambezi River. Young 128 (one). Southern Rhodesia. Adult 136–147 (two) ; young 128–137 (eight). Southern Portuguese East Africa. Adult 132–133 (three) ; Transvaal. Adult 137–143 (five) ; young 127–141 (three). Bechuanaland. Young 131 (one).

Culmen from base of all the above specimens is 21–28 mm.

The above wing measurements show a variation as follows :— Abyssinia, 23 ; Sudan, 10 ; Uganda, 16 ; Kenya Colony coast, 7 ; Kenya Colony inland, 12 ; Tanganyika Territory coastal, 8 ; Tanganyika Territory inland, 11 ; Northern Portuguese East Africa, 10 ; Nyasaland, 15 ; Northern Rhodesia, 4 ; Angola, 8, including young birds ; Southern Portuguese East Africa, 1 ; Transvaal, 6 mm.

ORIOLUS LARVATUS LARVATUS.

Wing 131–144, culmen from base 27–31 mm. (nineteen).

Wing variation 13 mm.

As we have already stated, *Oriolus larvatus larvatus* can be separated only on its longer bill. As regards the birds from Abyssinia to Bechuanaland and the Transvaal, we find the bill shorter than *O. l. larvatus*, but the wing measurements are so mixed and variable, including a variation of 12 mm. in three birds from Nairobi, that we can find no geographical

division by which races can be demarkated. It should be noted that the greatest variation of wing measurement occurs in Abyssinia, but there is no gradual change in size from the Sudan to Bechuanaland and the Transvaal.

We can therefore find no characters by which *Oriolis larvatus kikuyuensis* van Someren can be separated from *Oriolus larvatus rolleti* Salvadori, and agree with those authors who place it as a synonym.

(7) On the conspecific status of *Cinnyris venustus* (Shaw & Nodder) and *Cinnyris albiventris* (Strickland).

Sclater, Syst. Av. Æthiop. ii. 1930, pp. 691–692, treats these birds as separate species. Van Someren, Nov. Zool. xxxvii. 1932, p. 353, considers the latter to be a race of the former.

In the Southern Abyssinian collection presented to the British Museum by Mr. C. W. Benson is a series of male specimens from the Alghe area to the Tass Escarpment, but unfortunately only one female was collected. This series of males does show that there is an intergradation between *C. venustus* and *C. albiventris* in the above area, so that we can say that the two meet somewhere just east of Alghe, at Yavello and Mega, and where the road crosses the Tass Escarpment, also at the Orr Valley south of Lake Rudolf. We therefore agree with those authors who place *C. albiventris* as a race of *C. venustus*.

As for *Cinnyris venusta blicki* Mearns, Proc. U.S. Nat. Mus. xlviii. 1915, p. 386 : Lake Stephanie, southern Abyssinia and *Cinnyris venustus sukensis* Van Someren, Nov. Zool. xxxvii. 1932, p. 355 : Turkwell River, north-western Kenya Colony, they are founded on intermediates between *C. venustus* and *C. albiventris*, and must therefore be placed in the synonymy. As is always the case of names founded on intermediates, it is difficult to say under which bird they should be placed, but as both have some yellow below and steel blue and violet throats we place them in the synonymy of *C. venustus falkensteinii* Fischer & Reichenow.

(8) On the genus *Textor* Temminck, Nouv. Rec. Planch. Col. iii. 1828, pl. 446. Genotype, *Oriolus cucullatus* Gmelin :—

Oberholser, Sci. Pubs. Cleveland Mus. Nat. Hist. iv. no. 3, 1945, pp. 116 and 117, uses this genus for certain Weavers, and in so doing changes the name of *Ploceus intermedius* Rüppell, 1845 to *Textor cabanisii* (Peters), 1868, as he considers *Textor intermedius* Cabanis, 1868 is preoccupied by *Textor intermedius* Rüppell, 1845. This is surely not right,

as although *Textor*, 1828 may preoccupy *Sitagra* Reichenbach, 1850, Rüppell's name *Ploceus intermedius* was introduced in 1845, and the combination he used was not *Sitagra intermedius* or *Textor intermedius* but *Ploceus intermedius*. Even if we accept the combination *Textor intermedius*, Rüppell's specific name was introduced under *Ploceus*, and has priority over Cabanis' *Textor intermedius*. It would therefore follow that it is not *Ploceus intermedius* of Rüppell that would need changing but *Textor intermedius* of Cabanis.

Notice.

The next meeting will be held at the Rembrandt Hotel, South Kensington, on Wednesday, June 19, 1946. Dinner at 6.30 P.M., following which Mr. P. A. CLANCY will exhibit specimens, and Mr. H. W. S. KEY will show some of his colour transparencies of birds, nests and eggs.

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

7 - SEP 1948
PURCHASED

No. CCCCLXVII.

The four-hundred-and-sixtieth meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, S.W.7, on Wednesday, June 19, 1946, following a dinner at 6.30 P.M.

Chairman : Mr. D. SETH-SMITH.

Members present :—Miss C. M. ACLAND ; Miss P. BARCLAY-SMITH ; F. J. F. BARRINGTON ; A. GRAHAM BROWN ; P. A. CLANCEY ; R. P. DONALDSON ; Miss C. E. GODMAN ; Miss E. M. GODMAN ; Dr. J. M. HARRISON (*Vice-Chairman*) ; R. E. HEATH ; E. HOPKINSON ; Maj.-Gen. H. P. W. HUTSON ; N. B. KINNEAR ; Miss C. LONGFIELD ; Dr. G. CARMICHAEL LOW ; P. R. LOWE ; C. W. MACKWORTH-PRAED (*Vice-Chairman*) ; G. M. MATHEWS ; Col. R. MEINERTZHAGEN ; E. M. NICHOLSON ; Lt.-Col. W. A. PAYN ; B. B. ROBERTS ; H. N. SOUTHERN ; Lt.-Col. W. P. C. TENISON (*Editor and Hon. Sec.*) ; B. W. TUCKER ; Mrs. W. BOYD WATT ; C. DE WORMS.

Guests :—Mrs. GRAHAM BROWN ; Dr. H. B. COTT ; T. B. JACK ; Capt. R. A. JACKSON, R.N. ; Miss S. J. KINNEAR.

Members, 28 ; Guests, 5. Total, 33.

Two New Races of Acanthis cannabina (Linnæus) from the Western Palæarctic Region.

Mr. P. A. CLANCEY exhibited and described the following two new races :—

Acanthis cannabina sejuncta, subsp. nov.

Description.—Male, autumn, nearest *A. c. cannabina* (Linnæus), 'Systema Naturæ', ed. x, i. p. 182, 1758 : Sweden, from which it differs on

account of its darker chestnut-red mantle with more prominent striæ ; on underside generally somewhat darker. Female, autumn, whole of upperside darker, less warm brown, with heavy striations, particularly on the crown and mantle. Underparts richer, with darker markings than in the typical race.

Distribution.—At present only known from the Salisbury Plain, Wiltshire, England, where it abounds at all seasons of the year.

Type.—Female, first autumn by skull, moulting, Larkhill, nr. Amesbury, Wiltshire, England, September 19, 1942. In my collection.

Measurements of Type.—Wing 79·5 mm.

Material examined.—*A. c. sejuncta* : fresh autumn birds, four males, seven females ; breeding birds, fifteen males, six females ; juveniles, two. *A. c. cannabina* : series from Sweden, N. Germany, Heligoland, France and S.E. England. *A. c. mediterranea* Tschusi : small series from Italy. *A. c. nana* (Tschusi) : series. *A. c. bella* (Brehm) : series. *A. c. harterti* Bannerman, *A. c. meadewaldoi* Hartert and certain races from Asia not examined. *A. c. autochthona*, subsp. nov. ; see description.

Remarks.—August breeding birds in my collection from the typical locality show that, despite the loss of striæ through the effects of abrasion, the darker and duller ground colour of *A. c. sejuncta* is not lost, and it would appear that the race is separable at all seasons of the year. Samples taken from large flocks present on Salisbury Plain in January, 1943, show that *A. c. cannabina* (L.) occurs at this season. I have not observed the two races to mix.

Acanthis cannabina autochthona, subsp. nov.

Description.—Male, autumn, differs from *A. c. sejuncta*, its closest affinity, on account of the much darker grey-brown of the crown and nape ; darker and more heavily striated mantle ; duller underparts with more strongly accentuated gular markings. Female, autumn, considerably darker and more strongly striated on upperparts. Underside with darker markings than in *A. c. sejuncta*.

Distribution.—Imperfectly known at the present time. Specimens examined from the following counties of Scotland :—Renfrewshire, Lanarkshire and Fifeshire. A single male from Fair Isle in the collection of the Royal Scottish Museum obtained on January 31, 1911, is referable to this form, which is presumed to range throughout Scotland to the Orkneys and Shetlands.

Type.—Female, adult, breeding, obtained 2 miles east of Carmunnock, N.W. Lanarkshire, S.W. Scotland, June 10, 1939. In my collection.

Measurements of Type.—Wing 79 mm.

Material examined.—Fresh autumn birds, four males, one female; breeding birds, one male, one female; juveniles, two. For list of comparative series see under *Acanthis cannabina sejuncta.*

Remarks.—This race, perhaps the darkest and most distinctive of *Acanthis cannabina* yet named, is represented in collections by a mere handful of skins. A great many examples of this species from the northern regions of Scotland, particularly the northern Isles, are referable to the typical race, which can be readily separated from the new form by the pale head and light chestnut-red mantle. A single bird from the Mull of Galloway Light (Meinertzhagen collection) is the only example of the typical race which I have examined from the extreme south-west. As the native bird is somewhat thinly distributed in S.W. Scotland, some considerable time may elapse before a long series becomes available for research purposes, but, as the racial criteria in the material available are so saliently diagnostic, I am of the opinion a name should now be given. Some Northumberland birds in my collection show a leaning towards this form.

Witherby, 'Handbook of British Birds', vol. i. p. 78, gives as an available name for the English bird the *Fringilla Linota* of Latham, Gen. Syn. B. Suppl., i. p. 286 (1787) ex Gen. Synops., ii. p. 302, England. This reference is not given by Hartert in 'Vög. pal. Fauna', vol. i., who, on p. 73 gives *Fringilla Linota* as of Gmelin, 'Systema Naturæ', i. p. 916 (1788—Europa, ex Brisson, Buffon, Pennant, etc.). The fixation of the typical locality of Latham's *Fringilla Linota* is a task of some delicacy, but it is abundantly evident that this name cannot be used for either of the two new races of *Acanthis cannabina* (Linnæus). It may be that *Fringilla Linota* Latham is a substitute name for *Fringilla cannabina* Linnæus, 'Systema Naturæ', ed. x, i. p. 182, but only an analytical survey of germane literature can elucidate this point.

Specimens from E. and S.E. England are not separable from the Swedish bird, but the exact distribution of the typical race in our area now that indigenous British forms have been separated is not clearly understood.

A Review of Some Recent Researches, with Remarks on the Possible Outcome of the Present Intensive Racial Survey of British Birds.

Mr. P. A. Clancey read the following paper :—

This is the first opportunity I have had of addressing the British Ornithologists' Club, and it is my intention to review some of my recent researches into certain species of birds and then to visualise the racial map of Britain as it will appear on the completion of the comprehensive survey which I have in mind.

Perhaps the most interesting discoveries have been confined to the Paridæ. Here it is becoming increasingly evident that a strong tendency to local variation is finding expression in some interesting inconsistencies in the distribution of established races. For instance, it is now known that *Parus palustris dresseri* Stejneger is confined to the southern portion of the species' range in Great Britain, the northern type being somewhat similar to near Continental forms, either *P. p. stagnatilis* Brehm or *P. p. longirostris* Kleinschmidt. I am still collecting material with a view to further research, and a paper on the subject will be prepared in due course.

The finding of specimens of a Cole Tit approaching *Parus ater hibernicus* Ogilvie-Grant in the colouration of the nuchal spots and cheeks, in parts of west and north-west Scotland, is a discovery of some importance. As is already well known, birds resembling *P. a. hibernicus* are found in parts of South Wales, while in County Down, Northern Ireland, birds resembling our British race *P. a. britannicus* Sharpe and Dresser, are found. A great deal of collecting is clearly needed before this racial problem can be elucidated.

The validity of Přâzak's *Parus cæruleus obscurus* has never really been in doubt, but recent surveys of series from many parts of Britain have shown that this species is likewise strongly influenced by local factors, and I have succeeded in locating some three variations: two from England, tending to pallor and brightness of plumage, and one from Scotland, confined to the northern portion, exhibiting a tendency to darkness of the mantle.

The Great Tits of the British Isles have been receiving attention recently, and there is no need for me to go over what is already in print and available to all, but I do think a few more words on the question of the birds from northern Scotland will not go amiss. In the Bulletin for 1945, I suggested that the bird from this region might possibly be *Parus major major* Linnæus. I have recently acquired further material, and it now appears that the bird of this region is intermediate in bill structure and plumage

colouration between *P. m. major* and *P. m. newtoni*—a rather similar case to the one of East Anglian intergrades recently discussed by Dr. J. M. Harrison. I have not followed up Mr. Jeffery Harrison's very interesting account of south-western Scottish Great Tits, but feel sure than an examination of specimens from some of the Inner Hebrides would help to throw additional light on the question of a crassirostral west Scots form. The Island of Arran in the Firth of Clyde is a place of prominent importance in the study of western Scottish races, and Great Tits from there should be of some significance. As will be seen from these illustrations, the Paridæ present an enlightening picture of local variations of structure and plumage colouration, and I feel confident that further concentrated study of the British Group will add much to our knowledge of evolutionary change in the more incipient stages.

The British races of the Chaffinch, and particularly the question of the validity of *Fringilla cœlebs scotica* Harrison, 1937, have been discussed in a variety of notes, and I have quite recently reviewed the entire position and attempt to define the ranges of the forms occurring in our area. *F. c. gengleri* Kleinschmidt ranges throughout England, Wales and Ireland, overlapping *F. c. scotica* Harrison in south-east Scotland and *F. c. cœlebs* Linnæus in the East Anglian littoral. A closely allied but paler and brighter form is found in northern Scotland, and is entirely severed from the southern British race by a broad belt of *F. c. scotica*, which occurs throughout Scotland, south of the Grampian massif. It seems evident that the northern Scottish Chaffinch has, in a good many individuals, acquired racial criteria which would normally justify its accession to subspecific rank, but many are, however, like *F. c. gengleri*, and so the position is confused. A modification of the trinomial system of nomenclature should be devised to meet intricacies of this sort. A similar case is to be found in the distribution of *Chloris chloris* races in Great Britain. Studies into other members of the British Fringillidæ should prove equally instructive, but few of them are so widely distributed throughout these islands as the two species just mentioned. I am hoping to be in a position to make a statement on British Goldfinches (*Carduelis*) before the end of the year. As for the Hawfinch (*Coccothraustes*), I do not expect we will find much in the nature of local variation in Great Britian because the species is still extending its range northward. In the case of the Bullfinch I have found a belt of intergrades between *Pyrrhula pyrrhula nesa* Mathews and Iredale and *P. p. coccinea* in the coastal areas of east Suffolk and Essex. *P. p. coccinea* has not hitherto been recorded in this country; it is a good form, but only really separable from *P. p. nesa* in the female.

These remarks on the Fringillidæ will, no doubt, bring to your minds other species likely to be influenced by local factors. The Wren (*Troglodytes*) has been subject-matter for a considerable number of my ornithological communications. It is evident that the Wren in Britain is splitting up into a coterie of closely connected forms, or sub-races, and that the range of *Troglodytes troglodytes troglodytes* (Linnæus) is gradually shrinking as the local variations become more accentuated. Some of the colour differences are extremely fine, and can only be perceived in extensive series and after painstaking study. It may be that at some future date most of the British islands will possess their own named races of Wren, but at the present time it is evident that no further forms should be separated under name until a truly exhaustive material is available from the entire area to be covered. I am attempting something in the nature of a review for the species in continental Europe, but the material needed is vast and that available extremely meagre. Another species which has received attention recently is the Redbreast (*Erithacus*), and it has now been firmly established that a good many from extreme north of Scotland are darker, more earthen brown, above than *Erithacus rubecula melophilus* Hartert, some approaching closely the Continental race. Dr. Harrison has already indicated that some Redbreasts from south-east England exhibit similar tendencies. The colour cline of *Erithacus rubecula melophilus* reaches its apogee in western Scotland, and the interesting northern bird just described has been formed doubtless by an intergradation between this and the typical race from Scandinavia.

Here I must end my rough survey of recent racial researches—by no means the entire field covered, but highly illustrative of the type of work which is being carried out at the present time. I have not gone into points raised in my numerous notes and papers on western Palæarctic races, with which you are all well acquainted. It will be appreciated that I have had little time to pursue all channels of enquiry undertaken before and during the early part of the War, but it is my earnest desire to right this at the earliest possible opportunity. The amount of collecting which remains to be carried out before anything resembling a complete review can be undertaken is quite enormous. Careful map-work and planned collecting are the only methods by which many of the gaps in our available material and knowledge can be narrowed or closed.

I now come to what can loosely be described as the peroration of this short address—an attempt to try and visualise the possible outcome of the present racial research work into British birds.

For a considerable time now evidence as to the heterogeneity of the British mainland birds has been accumulating apace, and it is now clear that many areas support distinct forms (local variations) in varying stages of separability. For your guidance I will list the areas I have in mind, viz., north Scotland, that is Scotland north of the Grampian system ; south-west Scotland—with its strong Hebridean influences ; south-west Ireland ; Salisbury Plain ; the littoral of south-east England—an area of pronounced continental racial penetration. All these regions require much further study before theories are advanced as to the influences at work.

The question " How, with available names, can all these local variations be recognised ? " will at once come to mind. Mr. C. W. Mackworth-Praed dealt with the question in summary manner, and suggested an alteration in our nomenclature in ' The Ibis ' for 1943, but left much unanswered, while Dr. Harrison (1945) advanced still another modification of the trinomial system of zoological nomenclature, whereby forms based on slender criteria could be accorded recognition in scientific literature. As matters stand at present much of inestimable value is liable to slip into obscurity unless some modification or other of our present system of nomenclature is brought into use with the least conceivable delay. Of course, there is the view that the variations of which I speak can be given due recognition by the system as it stands at present, and in support of this contention I would here express the view that these variations are not necessarily less distinct than the bulk of named forms in continental Europe. I have always been strongly of the opinion that the validity of a form should rest solely on the measure of constancy of its imputed criteria and not on degree of separability. Races named on fine distinctions are considered as equally valid as those separated on extremely salient and palpable racial characteristics, because to ignore the former type can only result in one thing—complete and utter chaos. The ignoring of fine forms was followed in the ' Handbook of British Birds ' with amazing thoroughness and with most unsatisfactory results. We cannot compel Nature to accept the dictates of recognised scientific procedure, but must so modify our system of nomenclature that all types of races can be accorded due recognition.

To return to more friendly territory ; let us consider one or two of the difficulties which stand in the way of a speedy recasting of the entire racial layout in Britain. Many type-localities of British races are still undecided —nowadays a pinpoint fixation is needed. A type-locality, such as England or South England, can seriously hamper research. A case in point is that of *Totanus totanus britannicus* (Mathews) ; the author of this

race made the cardinal mistake of not giving a definite type-locality fixation. I agree there were difficulties in the way at the time which barred a fuller study of the entire question—but rushing into print can have its complications. *Totanus totanus britannicus* is now a race without a really definite type-locality. Dr. Harrison has suggested South England, but I have seen breeding birds from the eastern marshes of England which are certainly not representative of *T. t. britannicus*, as understood by the late Dr. Ticehurst. It is quite evident that a more precise fixation is called for. There are several other cases, but I will not deal with them here.

Old names in the synonymy are also a source of trouble; it is often not clear if they are merely substitute names for something already known or if the authors intended them to signify something recognised as distinct. A descriptive case is that of the *Fringilla Linota* of Latham, to which I have already referred in an earlier note. I am not in favour of resuscitating dubious names if a means by which they can be left dormant can be found.

The first essentials are, therefore, the careful fixation of type-localities and elimination of unwanted names. Once this has been accomplished the recasting can be started. I feel confident that in a few years' time much of the edifice we know so well at present will have changed, and instead of one name covering all the divergent chromatic and structural variations now evident in these islands, we will have a series of carefully named races with due recognition accorded to overlaps and penetrations of Continental influence. The recent work on Skylarks is illustrative of this prognosticism—Witherby in 1938 recognised no British races; in 1942 I supported *Alauda arvensis scotica* Tschusi, and suggested others existed. In 1946 I separated *Alauda arvensis tertialis*, from the Salisbury Plain, Wiltshire, England. Before many years have passed the Hebrides, Ireland, North Scotland, etc., etc., will, I believe, support their own named races of Skylarks. Similar tendencies are perceptible in other groups with which we are all conversant.

In ending this short address I would like to express the wish that we all face the changes around us with good grace, realising that the antithesis of progress is stagnation, and without progress finality in any science, if at all attainable, cannot possibly be achieved.

Mr. H. N. Southern then made some observations and has supplied the following note :—

The following remarks amplify the query I raised as to the number of specimens upon which Mr. Clancey's proposed races were based.

The description and naming of groups within a species involve a very different procedure from the description and naming of separate species. The fundamental nature of this difference does not seem to have been appreciated by recent systematic work in this country.

When one is dealing with systematic groups such as species, between which breeding is exceptional, the variation in the sum of the characters considered is *discontinuous*. It is, therefore, permissible to name and describe a new species from only a small amount of material, on the assumption (usually justified by subsequent information) that the characters described will be valid for the whole of the inter-breeding group concerned.

With subspecies, however, the matter is more difficult. Since one is dealing with groups that inter-breed (isolated subspecies must be considered as potentially inter-breeding), in most cases variation within the group is *continuous*, although the rate of change may not be constant for a given geographical distance. Thus, to take an extreme case, if a species is characterised by a steady increase in size of bill from one end of its range to the other, single specimens from each end will nearly always be separable. For any shorter distance, however (and consequent smaller range of difference), the chance that a single individual will not represent the mean for its neighbourhood becomes important. Thus it is quite possible that a small number of specimens obtained from two localities might show an apparent reversal of the general trend, since each sample would be too small to give a proper picture of the distribution of variation in one locality.

It is, in fact, improbable that in a size gradient or cline of this type the mean measurement will increase at a constant rate per mile (if this were so it would obviously be impossible to describe and name any subspecies), and therefore groups of sufficient individuality to receive a subspecific name will exist. It will, however, be impossible to distinguish with precision the boundaries of such groups except by the application of simple statistical methods : these require samples of a definite magnitude, according to the total range of variation being considered within the group. Though the the minimum size of sample required will vary in this way, it is safe to say that it will always be much higher than the numbers Mr. Clancey has used.

This illustration has used the character of size for the sake of simplicity. Naturally the same argument applies to variation in colour, although this is more difficult to measure. However, such measurements of colour have been carried out on Deer-Mice, and there is no reason why the method should not also be applied to birds.

The description of intra-specific variation can often be summarized by naming subspecies, but there are many cases where this cannot be done. Under present systematic procedure such kinds of variation have to stay undescribed, and this must remain so until some kind of adjustment is made.

Mr. B. W. Tucker then made some observations, of which the following is the gist (but some points have been amplified or added) :—

Mr. Clancey's researches raise points of much interest and emphasize the fact—certainly not novel to the more biologically-minded systematists—that the situation with regard to geographical variation in an area such as the British Isles may be a good deal less simple than was once supposed. The existence of areas in South-east England and elsewhere in which the populations of various species, or a certain proportion of individuals, agree or intergrade with long recognised Continental races is now seen to be not an exceptional and aberrant phenomenon, but one of widespread occurrence, which must be allowed due weight in any objective treatment of racial forms in the British Islands. At the same time we are getting evidence that apart from these Continental or quasi-Continental types, the populations of a number of species are less uniform over the whole area of Great Britain than was formerly assumed. The views and suggestions which Mr. Clancey has put forward with regard to these local variations merit close and unprejudiced consideration.

Nevertheless, I feel it is necessary to offer some words of warning on the subject. New ideas or methods in taxonomy, as in any other branch of science, should clearly not be rejected merely because they conflict with established procedure, or appear to do so, but neither should they be uncritically accepted merely because they are proclaimed to be " modern ", or because their merits are vigorously asserted by their authors.

Facts such as those to which we have had our attention drawn to-night reveal an evolutionary situation much more interesting than was implied by the assumption of uniform " British races " over at least the whole mainland of Great Britain, but also one of such complexity as to demand the employment of all the possible weapons of modern biological research if any real progress is to be made in its study.

I am sure Mr. Clancey will forgive me if I say that one danger which I see lies in a certain complacencey in his approach to the whole subject, and in the implication that all this work is extraordinarily " progressive ", and that those who may be disinclined to accept all his conclusions are mere obscurantists or too old-fashioned to appreciate the significance of these

" modern " developments. Now, in actual fact, it is, I believe, a serious weakness of researches of this kind in this country that they are themselves not sufficiently " up-to-date " in their approach, and are pursued with so little apparent awareness of the conclusions and methods of the more progressive systematists abroad, as well as of what I may call the broader biological background of the subject.

The most important work of the kind I have in mind emanates at present from America. It so happens that one of the most important and constructive contributions to evolutionary literature in recent years is the work of an ornithologist, Ernst Mayr, of the American Museum of Natural History. Mayr is not only the leading authority on the systematics of the birds of the East Indian and Pacific islands, as I need hardly remind this company, but also outstandingly well informed on the work of systematists in other fields of zoology than his own and on what I have called the broad biological background of modern systematics. His book ' Systematics and the Origin of Species ' (Columbia University Press, 1942) contains much that is relevant to the topic of this evening.

Another outstanding work bearing even more directly on the subject under discussion is A. H. Miller's ' Study of Speciation in the avian genus Junco ' (University of California Publications in Zoology, 1941), a really masterly treatment of just the type of problems we are concerned with to-night, using all the apparatus of modern systematic techniques. I earnestly commend these two works to all who are interested in the modern biological approach to systematics, and I would go so far as to say that no one is qualified to make any real progress in the subject who has not read and thoroughly digested their contents.

The whole subject is one of such extent and complexity that it is impossible to reveiw at all adequately in a brief extempore communication of this kind at the end of one of our meetings, but let me direct particular attention to one point which must be already present to the minds of many of you—I mean the designation by trinomial names of ever finer and finer geographical variants of more and more restricted distribution.

Mr. Southern has already called attention to the need for proper statistical treatment of proposed new races. I can, therefore, pass over this important consideration and concentrate on another point to which he has already briefly alluded, namely, that whereas in the higher vertebrates, species, with relatively few exceptions, are perfectly clear-cut entities, the recognition and definition of which is usually a comparatively simple and straightforward matter, the subspecies is something much less objective and less clearly defined. The defining and naming of subspecies is a

weapon for facilitating the study of geographical variation within the species, but if it is carried to exaggerated lengths there is a danger of the whole system collapsing under its own weight, or being reduced to futility and defeating the very object for which it was established.

It may be said that much the same sort of argument was put forward against the trinomial system itself in its early days, but I believe that whereas it was quite unjustified in that connection it is very much to the point at the present time and in the present context.

I will give you my reasons for this view. It is a fact that wherever organisms have been sufficiently intensively studied, as in the case of the Deer-Mouse, *Peromyscus*, the Fruit-Fly, *Drosophila*, and certain kinds of snails, it has been found that *any local population can be shown to be genetically different from any other*, provided only that the technique of analysis is sufficiently delicate and precise. If, then, a demonstrable difference is to be the only criterion, the logical and unavoidable conclusion which follows from this demonstration is that—at least in the case of fairly sedentary birds—names should ultimately be given to the populations of every moderately isolated area of woodland, moor or marsh—it is merely a matter of the delicacy of the analytical technique applied to them. This is a *reductio ad absurdum* of the practice of attempting to name ever smaller and smaller and less clearly isolated units. In the nature of the case a halt has got to be called at some point, and I suggest that the point should be that at which such multiplication of names begins merely to confuse and retard the study of geographic variation, and further that no subspecies ought to be considered even tentatively valid which does not conform to the statistical criteria mentioned by Mr. Southern and cannot be assigned a reasonably clearly defined area of distribution in which its characters are approximately constant. It may be a much truer representation of the facts of nature to say that a certain subspecies shows a tendency to be a little greyer in this area or a little browner in that than to attempt to cut it up into finer named subspecies with the implication of more or less clear-cut divisions which in fact have no reality.

Lest anyone should take exception to the views I am expressing, on the grounds that I am merely a biologist interested in systematics and not a working systematist, I will quote just two passages from Mayr's book.

" In some of these groups, as for example Palæarctic and Nearctic birds, even most of the ' good ' subspecies are already described, and a phase of excessive splitting has been reached. New subspecies are described because the means of the measurements differ by a few per cent. or because there is a very slight difference in the tone of general coloration. The populations on which such ' subspecies ' are based are

admittedly genetically different from others of the species, but to name them is impractical since it obscures rather than facilitates the presentation of the facts of intraspecific variation."

Or again,

" The terminology of the taxonomist, designed for practical purposes, is always an idealization and represents the facts as simpler than they are. The non-taxonomist and the beginner among taxonomists will save themselves much trouble if they realize this situation fully. Not even the most extreme splitting will ever lead to completely homogeneous categories."

It is indisputable that Mayr is one of the most progressive and able of modern taxonomists, and these passages could hardly be more apposite to the present discussion. I could quote others, but the two will suffice.

I realize, of course, that when I say that the giving of trinomial names should cease at (or before) the point when it merely confuses the issue and becomes a nuisance there will be differences of opinion as to where this point lies. But the trouble at present is that some taxonomical enthusiasts are not sufficiently aware of the biological facts which I have just put before you to realize that the necessity for finding some such practical solution of the problem exists.

Again, I should like it to be clearly understood that the considerations I have put before you are offered as general propositions in connection with the problem of intra-specific differentiation. At the moment I am not specifically criticizing any one, or necessarily criticizing any, of the local forms to which Mr. Clancey has given names, for I have not had the opportunity of investigating them sufficiently critically, but I do say emphatically that the critical evidence needed to defend them has not been brought forward so far.

To get back to the main problem of the multiplication of " micro-subspecies ", if several subspecies are to be recognised within the relatively insignificant area of the mainland of Great Britain, what must be the situation with species which range over a great part of the vast area of Continental Europe and Palæarctic Asia? I gather that Mr. Clancey thinks that, at any rate with some of the species he has studied, the uniformity over a large part of Continental Europe is relatively much greater than for some reason it is in Great Britain. But even supposing this to be so, it is quite beyond belief that in the immense areas to which I have alluded there are not a very great number of local populations as much entitled to distinction as some of Mr. Clancey's British races. And so, if his views are to be followed, we must visualize the eventual naming in each of a large number of widely distributed birds of hundreds of

subspecies, mostly with small and very uncertainly definable ranges and doubtfully identifiable on the basis of individual specimens. Such a situation would be a stultification of the whole principle of trinomial nomenclature.

It is, of course, well known that in continuous land areas not subdivided by natural barriers such as mountains or deserts the ranges of different subspecies are not sharply defined ; they are separated by zones of intergradation. This is just what we should expect, because the populations are not isolated from one another. But seeing that such transitional zones between subspecies are of normal occurrence, owing to the interpenetration of populations at their borders, how is it conceivable that such a relatively small and little isolated area as, say, Salisbury Plain, can be sufficiently free from interpenetration of this kind to maintain a population at once sufficiently distinct and sufficiently uniform to deserve the status of a named subspecies ? Such a situation is so inherently improbable that a claim to that effect requires to be supported by much more comprehensive evidence than Mr. Clancey offers us.

In conclusion I would like to repeat that I regard the facts which Mr. Clancey's studies are revealing as of great interest. They certainly deserve the closest investigation, but I am certain that they demand a much more critical approach than we have yet seen in this country. The issues we have been discussing this evening are serious ones, which have got to be faced by scientific ornithologists here if we are not to lag behind our friends in America and elsewhere, floundering in a morass of mere names, the employment of which for small and ill-defined local populations I believe to be downright misleading and, if persisted in, likely to retard progress in the study of the phenomena of local variation rather than to advance it.

It may be that a modification of current taxonomic procedure *can* be found to cover fine local variation without doing violence to the facts of nature : or it may be, as I myself am convinced, that trying to define local populations by trinomial names, or definite labels in any form, has gone about as far as it can go in western Europe without defeating the objects of the trinomial system, and that a quite different technique is needed. But as a preliminary to a new approach to the whole problem, we should at least recognise where an over-enthusiasm for mere rule-of-thumb naming of local forms may lead us, lest we find ourselves acquiescing in the development of a system of such complexity that no one can cope with it, with no compensating advantage in the better understanding of the facts of geographical variation.

Notice.

The Annual General Meeting of the Club will be held at the Rembrandt Hotel, South Kensington, S.W.7, on Wednesday, October 16, 1946, at 5.45 P.M. Dinner at 6.30 P.M., after which the ordinary meeting will be held when Dr. V. Delacour will show some films.

CORRIGENDA.

VOL. LXV.

Page 18, line 21, for *Buccanodon sowerbyi buttoni* read *Buccanodon whytii buttoni.*
,, line 22, for *Buccanodon sowerbyi stresemanni* read *Buccanodon whytii stresemanni.*
,, line 31, for *B. s. stresemanni* read *B. w. stresemanni.*
,, ,, for *B. s. buttoni* read *B. w. buttoni.*
,, 19, line 1, for *Buccanodon sowerbyi* read *Buccanodon whytii.*

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Page 7, line 20, for *F. c. cypriaca* read *F. c. cypriotis.*
,, 11, footnote, for *Sigmodius scopifrons* read *Sigmodus scopifrons.*
,, 12, line 31, for *C. emini* read *A. emini.*
,, ,, line 32, for *C. zenkeri* read *A. zenkeri.*
,, 45, line 10, for *Pycnonotus xanthopyga layardi* read *Pycnonotus xanthopyos layardi.*

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